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NORTH CAROLINA HAZARDOUS WASTE MANAGEMENT RULES

and

SOLID WASTE MANAGEMENT LAW



DIVISION OF WASTE MANAGEMENT
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March 1, 1997

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March 1, 1997

300 copies of this public document were printed
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Introduction

Both the North Carolina Hazardous Waste Management Rules and the North Carolina Solid Waste Management Law are included in this publication. Although most of the requirements are found in the Rules, there are some additional requirements found only in the Law. References to those requirements are included after each rule that applies. Requirements in both the Rules and/or the Law must be met.

The summary table of contents provides a breakout of the major topics of the publication. Additional requirements to the Rules are cited in the Law for Rules Number: .0102, .0109, and .0113 as follows:

Subject

Rule - .0102	Definitions
Law - 130A-290	
Rule - .0109	Standards for Owners/Operators of HWMF's - Part 264
Law - 130A-292	Conveyence of Land Used for Hazardous Waste Landfill Facility to the State
Law - 130A-293	Local Ordinance Prohibiting Hazardous Waste Facilities Invalid; Petition to Establish Facility
Law - 130A-296	Limitations on Powers of Local Governments
Law - 130A-301	Recordation of Permits for Disposal of Waste on Land
Rule - .0113	Permitting Requirements - Part 270
Law - Same as for Rule .0109	

Rule requirements where a provision applies to several sections of a rule are cross referenced.

Explanation of

Cross Reference Descriptions

Most of the North Carolina Hazardous Waste Management Rules are EPA regulations, which have been incorporated by reference in accordance with G.S.150B-21.6 (Incorporating material in a rule by reference).

Additional state rules are found as: part of the paragraph description i.e. paragraph (a) ---"provisions have been incorporated by reference including subsequent amendments and editions. In addition a TSD shall---". State provisions are sometimes included as: a subparagraph immediately following the rule cite i.e. paragraph (a) (1) "the following shall be substituted for the provisions of 40 CFR --- --- which were not incorporated by reference."

In situations where a state-written portion of a rule replaces a 40 CFR cite, the state-written portion is cross referenced and is not repeated within the 40 CFR portion of the rule. Rule subdivisions are identified below:

Rule .0109

State Written

Paragraph (a)
Subparagraph (1)
Part (A)
Subpart (i)

Incorporated by Reference

(b)

264.1 40 CFR Cite

(a)
(1)
(i)
(A)

PART I

HAZARDOUS WASTE MANAGEMENT RULES

15A NCAC 13A

.0101 GENERAL

(a) The Hazardous Waste Section of the Division of Waste Management shall administer the hazardous waste management program for the State of North Carolina.

(b) In applying the federal requirements incorporated by reference throughout this Subchapter, the following substitutions or exceptions shall apply:

(1) "Department of Environment, Health, and Natural Resources" shall be substituted for "Environmental Protection Agency" except in 40 CFR 262.51 through 262.54, 262.56, 262.57 where references to the Environmental Protection Agency shall remain without substitution;

(2) "Secretary of the Department of Environment, Health, and Natural Resources" shall be substituted for "Administrator," "Regional Administrator" and "Director" except for 40 CFR 262.55 through 262.57, 264.12(a), 268.5, 268.6, 268.42(b) and 268.44 where the references to the Administrator, Regional Administrator, and Director shall remain without substitution; and

(3) An "annual report" shall be required for all hazardous waste generators, treaters, storers, and disposers rather than a "biennial report".

(c) In the event that there are inconsistencies or duplications in the requirements of those Federal rules incorporated by reference throughout this Subchapter and the State rules set out in this Subchapter, the provisions incorporated by reference shall prevail except where the State rules are more stringent.

(d) 40 CFR 260.1 through 260.3 (Subpart A), "General," have been incorporated by reference including subsequent amendments and editions.

SUBPART A - GENERAL

260.1 Purpose, scope and applicability.

(a) This part provides definitions of terms, general standards, and overview information applicable to Parts 260 through 265 and 268 of this chapter.

(b) In this part:

(1) Section 260.2 sets forth the rules that EPA will use in making information it receives available to the public and sets forth the requirements that generators, transporters, or owners or operators of treatment, storage, or disposal facilities must follow to assert claims of business confidentiality with respect to information that is submitted to EPA under Parts 260 through 265 and 268 of this chapter.

(2) Section 260.3 establishes rules of grammatical construction for Parts 260 through 265 of this chapter.

(3) Section 260.10 defines terms which are used in Parts 260 through 265 and 268 of this chapter.

(4) Section 260.20 establishes procedures for petitioning EPA to amend, modify, or revoke any provision of Parts 260 through 265 and 268 of this chapter and establishes procedures governing EPA's Action on such petitions.

(5) Section 260.21 establishes procedures for petitioning EPA to approve testing methods as equivalent to those prescribed in Parts 261, 264, or 265 of this chapter.

(6) Section 260.22 establishes procedures for petitioning EPA to amend Subpart D of Part 261 to exclude a waste from a particular facility.

260.2 Availability of information; confidentiality of information.

(a) Any information provided to EPA under Parts 260 through 265 and 268 of this chapter will be made available to the public to the extent and in the manner authorized by the Freedom of Information Act, 5 U.S.C. Section 552, Section 3007(b) of RCRA and EPA regulations implementing the Freedom of Information Act and Section 3007(b), Part 2 of this chapter, as applicable.

(b) Any person who submits information to EPA in accordance with Parts 260 through 266 and 268 of this chapter may assert a claim of business confidentiality covering part or all of that information by following the procedures set forth in 2.203(b) of this chapter. Information covered by such a claim will be disclosed by EPA

only to the extent, and by means of the procedures, set forth in Part 2, Subpart B, of this chapter except that information required by 262.53(a) and 262.83 that is submitted in a notification of intent to export a hazardous waste will be provided to the U.S. Department of State and the appropriate authorities in the transit and receiving or importing countries regardless of any claims of confidentiality. However, if no such claim accompanies the information when it is received by EPA, it may be made available to the public without further notice to the person submitting it.

260.3 Use of number and gender.

As used in Parts 260 through 265 and 268 of this chapter:

(a) Words in the masculine gender also include the feminine and neuter genders; and

(b) Words in the singular include the plural; and

(c) Words in the plural include the singular.

(e) 40 CFR 260.11, "References", has been incorporated by reference including subsequent amendments and editions.

260.11 References

(a) When used in Parts 260 through 270 of this chapter, the following publications are incorporated by reference:
API Publication 2517, Third Edition, February 1989, "Evaporative Loss from External Floating-Roof Tanks," available from the American Petroleum Institute, 1220 L. Street, Northwest, Washington, D.C. 20005.

"ASTM Standard Test Methods for Flash Point of Liquids by Setaflash Closed Tester," ASTM Standard D-3278-78, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pa. 19103.

"ASTM Standard Test Methods for Flash Point by Pensky-Martens Closed Tester," ASTM Standard D-93-79 or D-93-80. D-93-80 is available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pa., 19103.

"ASTM Standard Method for Analysis of Reformed Gas by Gas Chromatography," ASTM Standard D 1946-82, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

"ASTM Standard Test Method for Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method)," ASTM Standard D 2382-83, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

"ASTM Standard Practices for General Techniques of Ultraviolet-Visible Quantitative Analysis," ASTM Standard E 169-87, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

"ASTM Standard Practices for General Techniques of Infrared Quantitative Analysis," ASTM Standard E 168-88, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

"ASTM Standard Practice for Packed Column Gas Chromatography," ASTM Standard E 260-85, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

"ASTM Standard Test Method for Aromatics in Light Naphthas and Aviation Gasolines by Gas Chromatography," ASTM Standard D 2267-88, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

"ASTM Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteriscope," ASTM Standard D 2879-92, available from American Society for Testing and Materials, (ASTM), 1916 Race Street, Philadelphia, PA 19103.

"ASTM Standard Test Methods for Preparing Refuse-Derived Fuel (RDF) Samples for Analyses of Metals," ASTM Standard E926-88, Test Method C-Bomb, Acid Digestion Method, available from American Society for Testing Materials, 1916 Race Street, Philadelphia, PA 19108.

"APTI Course 415: Control of Gaseous Emissions," EPA Publication EPA-450/2-81-005, December 1981, available from National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

"Flammable and Combustible Liquids Code" (1977 or 1981), available from the National Fire Protection Association, 470 Atlantic Avenue, Boston, Massachusetts 02210.

"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 [Third Edition (November, 1986), as amended by Updates I (July 1992), II (September, 1994, IIA (August, 1993), and IIB (January, 1995)]. The Third Edition of SW-846 and Updates I, II, IIA, and IIB (document number 955-001-00000-1) are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 512-1800. Copies may be inspected at the Library, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460.

U.S. EPA, "Screening Procedures for Estimating the Air quality Impact of Stationary Sources," August 1988, Available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161, (703) 487-4600. The document number is PB89-159-396.

API Publication 2517, Third Edition, February, 1989, "Evaporative Loss from External Floating-Roof Tanks," available from the American Petroleum Institute, 1220 L Street, Northwest, Washington, D.C. 20005.

"ASTM Standard Test Method for Vapor Pressure--Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope," ASTM Standard D 2879-92, available from American Society for Testing and materials (ASTM), 1916 Testing and Materials (ASTM, 1916 Race Street, Philadelphia, Pennsylvania 19103;

0010 Modified Method 3 Sampling Train
0020 Source Assessment Sampling System (SASS)
0030 Volatile Organic Sampling Train
1320 Multiple Extraction Procedure
1330 Extraction Procedure for Oily Wastes
3611 Alumina Column Cleanup and Separation of Petroleum Wastes
5040 Protocol for Analysis of Sorbent Cartridges from Volatile Organic Sampling Train
6010 Inductively Coupled Plasma Atomic Emission Spectroscopy
7090 Beryllium (AA, Direct Aspiration)
7091 Beryllium (AA, Furnace Technique)
7198 Chromium, Hexavalent (Differential Pulse Polarography)
7210 Copper (AA, Direct Aspiration)
7211 Copper (AA, Furnace Technique)
7390 Iron (AA, Direct Aspiration)
7381 Iron (AA, Furnace Technique)
7460 Manganese (AA, Direct Aspiration)
7461 Manganese (AA, Furnace Technique)
7550 Osmium (AA, Direct Aspiration)
7770 Sodium (AA, Direct Aspiration)
7940 Thallium (AA, Direct Aspiration)
7941 Thallium (AA, Furnace Technique)
7910 Vanadium (AA, Direct Aspiration)
7911 Vanadium (AA, Furnace Technique)
7950 Zinc (AA, Direct Aspiration)
7951 Zinc (AA, Furnace Technique)
9022 Total Organic Halides (TOX) by Neutron Activation Analysis
9035 Sulfate (Colorimetric, Automated, Chloranilate)
9036 Sulfate (Colorimetric, Automated, Methylthymol Blue, AA II)
9038 Sulfate (Turbidimetric)
9060 Total Organic Carbon
9065 Phenolics (Spectrophotometric, Manual 4-AAP with Distillation)
9066* Phenolics (Colorimetric, Automated 4-AAP with Distillation)
9067 Phenolics (Spectrophotometric, MBTH with Distillation)
9070 Total Recoverable Oil and Grease (Gravimetric, Separatory Funnel Extraction)
9071 Oil and Grease Extraction Method for Sludge Samples
9080 Cation-Exchange Capacity of Soils (Ammonium Acetate)
9081 Cation-Exchange Capacity of Soils (Sodium Acetate)
9100 Saturated Hydraulic Conductivity, Saturated Leachate Conductivity, and Intrinsic Permeability
9131 Total Coliform: Multiple Tube Fermentation Technique
9132 Total Coliform Membrane Filter Technique
9200 Nitrate
9250 Chloride (Colorimetric, Automated Ferricyanide AAI)
9251 Chloride (Colorimetric, Automated Ferricyanide AAII)
9252 Chloride (Titrimetric, Mercuric Nitrate)
9310 Gross Alpha and Gross Beta
9315 Alpha-Emitting Radium Isotopes
9320 Radium-228

*When Method 9066 is used it must be preceded by the manual distillation specified in procedure 7.1 of Method 9065. Just prior to distillation in Method 9065, adjust the sulfuric acid-preserved sample to pH 4 with 1 + 9 NaOH. After the manual distillation is completed, the autoanalyzer manifold is simplified by connecting the re-sample line directly to the sampler.

(b) The references listed in paragraph (a) of this section are also available for inspection at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, D.C. 20408. These incorporations by reference were approved by the Director of the Federal Register. These materials are incorporated as they exist on the date of approval and a notice of any change in these materials will be published in the FEDERAL REGISTER.

(f) Copies of all materials in this Subchapter may be inspected or obtained as follows:

(1) Persons interested in receiving rule-making notices concerning the North Carolina Hazardous Waste Management Rules must submit a written request to the Hazardous Waste Section, P.O. Box 29603, Raleigh, N.C. 27611-9603. A check in the amount of fifteen dollars ($15.00) made payable to The Hazardous Waste Section must be enclosed with each request. Upon receipt of each request, individuals will be placed on a mailing list to receive notices for one year.

(2) Material incorporated by reference in the Federal Register may be obtained from the Superintendent of Documents, U.S. Government Printing office, Washington, D.C. 20402 at a cost of four hundred and fifteen dollars ($415.00) per year. Federal Register materials are codified once a year in the Code of Federal Regulations and may be obtained at the above address for a cost of: 40 CFR 2-51 thirty one dollars ($31.00), 40 CFR 260-299 thirty six dollars ($36.00) and 40 CFR 100-149 thirty four dollars ($34.00), total one hundred and one dollars ($101.00).

(3) The North Carolina Hazardous Waste Management Rules, including the incorporated by reference materials, may be obtained from the Hazardous Waste Section at a cost of sixteen dollars ($16.00).

(4) All material is available for inspection at the Department of Environment, Health, and Natural Resources, Hazardous Waste Section, 401 Oberlin Road, Raleigh, North Carolina.

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. September 1, 1979;
Amended Eff. June 1, 1989; June 1, 1988;
August 1, 1987; May 1, 1987;
Transferred and Recodified from 10 NCAC 10F
.0001 Eff. April 4, 1990; Amended Eff. October 1, 1993;
April 1, 1993; October 1, 1992; December 1, 1991;
October 1, 1990; August 1, 1990;
Recodified from 15A NCAC 13A .0001 Eff. December 20, 1996.

.0102 DEFINITIONS

(a) The definitions contained in G.S. 130A-290 apply to this Subchapter.

(b) 40 CFR 260.10 (Subpart B), Definitions, has been incorporated by reference, including subsequent amendments and editions except that the Definitions for "Disposal", "Landfill", "Management or hazardous waste management", "Person", "Sludge", "Storage", and "Treatment" are defined by G.S. 130A-290 and are not incorporated by reference.

{**Note**: Definitions contained in 40 CFR 270.2 are found in Rule .0113, Paragraph (a)(2) and definitions contained in 40 CFR 124.2 are found in Rule .0105 (2)}.

SUBPART B - DEFINITIONS

260.10 Definitions.

When used in parts 260 through 266, 268, and 270 through 273 of this chapter, the following terms have the meanings given below:

Aboveground tank means a device meeting the definition of "tank" in 260.10 and that is situated in such a way that the entire surface area of the tank is completely above the plane of the adjacent surrounding surface and the entire surface area of the tank (including the tank bottom) is able to be visually inspected.

Act or *RCRA* means the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. section 6901 et seq.

Active life of a facility means the period from the initial receipt of hazardous waste at the facility until the Regional Administrator receives certification of final closure.

Active portion means that portion of a facility where treatment, storage, or disposal operations are being or have been conducted after the effective date of Part 261 of this chapter and which is not a closed portion. (See also "closed portion" and "inactive portion".)

Administrator means the Administrator of the Environmental Protection Agency, or his designee.

Ancillary equipment means any device including, but not limited to such devices as piping, fittings, flanges, valves, and pumps, that is used to distribute, meter, or control the flow of hazardous waste from its point of generation to a storage or treatment tank(s), between hazardous waste storage and treatment tanks to a point of disposal on-site, or to a point of shipment for disposal off-site.

Aquifer means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs.

Authorized representative means the person responsible for the overall operation of a facility or an operational unit (i.e., part of a facility), e.g., the plant manager, superintendent or person of equivalent responsibility.

Battery means a device consisting of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus such connections (electrical and mechanical) as may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.

Boiler means an enclosed device using controlled flame combustion and having the following characteristics:

(1) (i) The unit must have physical provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases; and

(ii) The unit's combustion chamber and primary energy recovery section(s) must be of integral design. To be of integral design, the combustion chamber and the primary energy recovery section(s) (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 section (s) 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. The following units are not precluded from being boilers solely because they are not of

integral design: process heaters (units that transfer energy directly to a process stream), and fluidized bed combustion units; and

(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 feedwater pumps); or

(2) The unit is one which the Regional Administrator has determined, on a case-by-case basis, to be a boiler, after considering the standards in Section 260.32.

Carbon regeneration unit means any enclosed thermal treatment device used to regenerate spent activated carbon.

Certification means a statement of professional opinion based upon knowledge and belief.

Closed portion means that portion of a facility which an owner or operator has closed in accordance with the approved facility closure plan and all applicable closure requirements. (See also "active portion" and "inactive portion".)

Component means either the tank or ancillary equipment of a tank system.

Confined aquifer means an aquifer bounded above and below by impermeable beds or by beds of distinctly lower permeability than that of the aquifer itself; an aquifer containing confined ground water.

Container means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

Containment building means a hazardous waste management unit that is used to store or treat hazardous waste under the provisions of subpart DD of parts 264 or 265 of this chapter.

Contingency plan means a document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

Corrective action management unit or CAMU means an area within a facility that is designated by the Regional Administrator under part 264 subpart S, for the purpose of implementing corrective action requirements under Section 264.101 and RCRA section 3008(h). A CAMU shall only be used for the management of remediation wastes pursuant to implementing such corrective action requirements at the facility.

Corrosion expert means a person who, by reason of his knowledge of the physical sciences and the principals of engineering and mathematics, acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be certified as being qualified by the National Association of Corrosion Engineers (NACE) or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control on buried or submerged metal piping systems and metal tanks.

Designated facility means a hazardous waste treatment, storage, or disposal facility which (1) has received a permit (or interim status) in accordance with the requirements of Parts 270 and 124 of this chapter, (2) has received a permit (or interim status) from a State authorized in accordance with Part 271 of this chapter, or (3) is regulated under Section 261.6(c)(2) or Subpart F of Part 266 of this chapter, and (4) that has been designated on the manifest by the generator pursuant to Section 262.20. If a waste is destined to 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.

Destination facility means a facility that treats, disposes of, or recycles a particular category of universal waste, except those management activities described in paragraphs (a) and (c) of Sections 273.13 and 273.33 of this chapter. A facility at which a particular category of universal waste is only accumulated, is not a destination facility for purposes of managing that category of universal waste.

Dike means an embankment or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids, or other materials.

Discharge or *hazardous waste discharge* means the accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous waste into or on any land or water.

"Disposal" **See G.S. 130A-290**

Disposal facility means a facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which waste will remain after closure. The term disposal facility does not include a corrective action management unit into which remediation wastes are placed.

Drip pad is an engineered 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 means a device which:

(1) Is used for neutralizing wastes that are hazardous only because they exhibit the corrosivity characteristic defined in Section 261.22 of this chapter, or are listed in Subpart D of Part 261 of the chapter only for this reason; and,

(2) Meets the definition of tank, tank system, container, transport vehicle, or vessel in Section 260.10 of this chapter.

EPA hazardous waste number means the number assigned by EPA to each hazardous waste listed in Part 261, Subpart D, of this chapter and to each characteristic identified in Part 261, Subpart C, of this chapter.

EPA identification number means the number assigned by EPA to each generator, transporter, and treatment, storage, or disposal facility.

EPA region means the states and territories found in any one of the following ten regions:

Region I - Maine, Vermont, New Hampshire, Massachusetts, Connecticut, and Rhode Island.
Region II - New York, New Jersey, Commonwealth of Puerto Rico, and the U.S. Virgin Islands.
Region III - Pennsylvania, Delaware, Maryland, West Virginia, Virginia and the District of Columbia.
Region IV - Kentucky, Tennessee, North Carolina, Mississippi, Alabama, Georgia, South Carolina, and Florida.
Region V - Minnesota, Wisconsin, Illinois, Michigan, Indiana, and Ohio.
Region VI - New Mexico, Oklahoma, Arkansas, Louisiana, and Texas.
Region VII - Nebraska, Kansas, Missouri, and Iowa.
Region VIII - Montana, Wyoming, North Dakota, South Dakota, Utah, and Colorado.
Region IX - California, Nevada, Arizona, Hawaii, Guam, American Samoa, Commonwealth of the Northern Mariana Islands.
Region X - Washington, Oregon, Idaho, and Alaska.

Equivalent method means any testing or analytical method approved by the Administrator under Sections 260.20 and 260.21.

Existing hazardous waste management (HWM) facility or *existing facility* means a facility which was in operation or for which construction commenced on or before November 19, 1980. A facility has commenced construction if:

(1) The owner or operator has obtained the Federal, State and local approvals or permits necessary to begin physical construction; and either

(2) (i) A continuous on-site, physical construction program has begun; or

(ii) The owner or operator has entered into contractual obligations--which cannot be cancelled or modified without substantial loss--for physical construction of the Facility to be completed within a reasonable time.

Existing portion means that 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 or *existing component* means a tank system or component that is used for the storage or treatment of hazardous waste and that is in operation, or for which installation has commenced on or prior to July 14, 1986. Installation will be considered to have commenced if the owner or operator has 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 has begun, or (2) the owner or operator has entered into contractual obligations – which cannot be canceled or modified without substantial loss -- for physical construction of the site or installation of the tank system to be completed within a reasonable time.

Explosives or munitions emergency means a situation involving the suspected or detected presence of unexploded ordnance (UXO), damaged or deteriorated explosives or munitions, an improvised explosive device (IED), other potentially explosive material or device, or other potentially harmful military chemical munitions or device, that creates an actual or potential imminent threat to human health, including safety, or the environment, including property, as determined by an explosives or munitions emergency response specialist. Such situations may require immediate and expeditious action by an explosives or munitions emergency response specialist to control, mitigate, eliminate the threat.

Explosives or munitions emergency response means all immediate response activities by an explosives and munitions emergency response specialist to control, mitigate, or eliminate the actual or potential threat encountered during an explosives or munitions emergency. An explosives or munitions emergency response may include in-place render-safe procedures, treatment or destruction of the explosives or munitions and/or transporting those items to another location to be rendered safe, treated, or destroyed. Any reasonable delay in the completion of an explosives or munitions emergency response caused by a necessary, unforeseen, or uncontrollable circumstance will not terminate the explosives or munitions emergency. Explosives and

munitions emergency responses can occur on either public or private lands and are not limited to responses at RCRA facilities.

Explosives or munitions emergency response specialist means an individual trained in chemical or conventional munitions or explosives handling, transportation, render-safe procedures, or destruction techniques. Explosives or munitions emergency response specialists include Department of Defense (DOD) emergency explosive ordinance disposal (EOD), technical escort unit (TEU), and DOD-certified civilian or contractor personnel; and other Federal, State, or local government, or civilian personnel similarly trained in explosives or munitions emergency responses.

Facility means: (1) All contiguous land, and 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 combinations of them).

(2) For the purpose of implementing corrective action under Section 264.101, all contiguous properly under the control of the owner or operator seeking a permit under subtitle C of RCRA. This definition also applies to facilities implementing corrective action under RCRA Section 3008(h).

Federal agency means any department, agency, or other instrumentality of the Federal Government, any independent agency or establishment of the Federal Government including any Government corporation, and the Government Printing Office.

Federal, State and local approvals or permits necessary to begin physical construction means permits and approvals required under Federal, State or local hazardous waste control statutes, regulations or ordinances.

Final closure means the closure of all hazardous waste management units at the facility in accordance with all applicable closure requirements so that hazardous waste management activities under Parts 264 and 265 of this chapter are no longer conducted at the facility unless subject to the provisions in 262.34.

Food-chain crops means tobacco, crops grown for human consumption, and crops grown for feed for animals whose products are consumed by humans.

Free liquids means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure.

Freeboard means the vertical distance between the top of a tank or surface impoundment dike, and the surface of the waste contained therein.

Generator means any person, by site, whose act or process produces hazardous waste identified or listed in Part 261 of this chapter or whose act first causes a hazardous waste to become subject to regulation.

Ground water means water below the land surface in a zone of saturation.

Hazardous waste means a hazardous waste as defined in Section 261.3 of this chapter.

Hazardous waste constituent means a constituent that caused the Administrator to list the hazardous waste in Part 261, Subpart D, of this chapter, or a constituent listed in Table 1 of Section 261.24 of this chapter.

Hazardous waste management unit is a contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include a surface impoundment, a waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment system and a container storage area. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are placed.

In operation refers to a facility which is treating, storing, or disposing of hazardous waste.

Inactive portion means that portion of a facility which is not operated after the effective date of Part 261 of this chapter. (See also "active portion" and "closed portion".)

Incinerator means any enclosed device that:

(1) Uses controlled flame combustion and neither meets the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, nor is listed as an industrial furnace; or

(2) Meets the definition of infrared incinerator or plasma arc incinerator.

Incompatible waste means a hazardous waste which is unsuitable for:

(1) Placement in a particular device or facility because it may cause corrosion or decay or containment materials (e.g., container inner liners or tank walls); or

(2) Commingling with another waste or material under uncontrolled conditions because the commingling might produce heat or pressure, fire or explosion, violent reaction, toxic dusts, mists, fumes, or gases, or flammable fumes or gases. (See Part 265, Appendix V, of this chapter for examples.)

Individual generation site means the contiguous site at or on which one or more hazardous wastes are generated. An individual generation site, such as a large manufacturing plant, may have one or more sources of hazardous waste but is considered a single or individual generation site if the site or property is contiguous.

Industrial furnace means any of the following enclosed devices that are integral components of manufacturing processes and that use thermal treatment to accomplish 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 machine, roasters, and foundry furnaces)
(8) Titanium dioxide chloride process oxidation reactors
(9) Methane reforming furnaces
(10) Pulping liquor recovery furnaces
(11) Combustion devices used in 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 waste burned as 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 or reduce 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;
  (v) The use of the device in common industrial practice to produce a material product; and
  (vi) Other factors, as appropriate.

Infrared incinerator means any enclosed device that uses electric powered resistance heaters as a source of radiant heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace.

Inground tank means a device meeting the definition of "tank" in 260.10 whereby a portion of the tank wall is situated to any degree within the ground, thereby preventing visual inspection of that external surface area of the tank that is in the ground.

Injection well means a well into which fluids are injected. (See also "underground injection".)

Inner liner means a continuous layer of material placed inside a tank or container which protects the construction materials of the tank or container from the contained waste or reagents used to treat the waste.

Installation inspector means a person who, by reason of his knowledge of the physical sciences and the principals of engineering, acquired by a professional education and related practical experience, is qualified to supervise the installation of tank systems.

International shipment means the transportation of hazardous waste into or out of the jurisdiction of the United States.

"Landfill" **See G.S. 130A-290**

Landfill cell means a discrete volume of a hazardous waste landfill which uses a liner to provide isolation of wastes from adjacent cells or wastes. Examples of landfill cells are trenches and pits.

Land treatment facility means 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 will remain after closure.

Leachate means any liquid, including any suspended components in the liquid, that has percolated through or drained from hazardous waste.

Leak-detection system means a system capable of detecting the failure of either the primary or secondary containment structure or the presence of a release of hazardous waste or accumulated liquid in the secondary containment structure. Such a system must employ operational controls [e.g., daily visual inspections for releases into the secondary containment system of aboveground tanks] or consist of an interstitial monitoring device designed to detect continuously and automatically the failure of the primary or secondary containment structure or the presence of a release of hazardous waste into the secondary containment structure.

Liner means a continuous layer of natural or man-made materials, beneath or on the sides of a surface impoundment, landfill, or landfill cell, which restricts the downward or lateral escape of hazardous waste, hazardous waste constituents, or leachate.

"Management or hazardous waste management" **See G.S. 130A-290**

Manifest means the shipping document EPA form 8700-22 and, if necessary, EPA form 8700-22A, originated and signed by the generator in accordance with the instructions included in the Appendix to Part 262.

Manifest document number means the U.S. EPA twelve digit identification number assigned to the generator plus a unique five digit document number assigned to the Manifest by the generator for recording and reporting purposes.

Military munitions means all ammunition products and components produced or used by or for the U.S. Department of Defense or the U.S. Armed Services for national defense and security, including military munitions under the control of the Department of Defense, the U.S. Coast Guard, the U.S. Department of Energy (DOE), and National Guard personnel. The term military munitions includes: confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries used by DOD components, including bulk explosives and chemical warfare agents, chemical munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, and devices and components thereof military munitions do not include wholly inert items, improvised explosive devices, and nuclear weapons, nuclear devices, and nuclear components thereof. However, the term does include non-nuclear components of nuclear devices, managed under DOE's nuclear weapons program after all required sanitization operations under the Atomic Energy Act. of 1954, as amended, have been completed.

Mining overburden returned to the mine site means any material overlying an economic mineral deposit which is removed to gain access to that deposit and is then used for reclamation of a surface mine.

Miscellaneous unit means a hazardous waste management unit where hazardous waste is treated, stored, or disposed of and that is not a container, tank, surface impoundment, pile, land treatment unit, landfill, incinerator, boiler, industrial furnace, underground injection well with appropriate technical standards under 40 CFR Part 146, containment building, corrective action management unit, or unit eligible for research, development, and demonstration permit under Section 270.65.

Movement means that hazardous waste is transported to a facility in an individual vehicle.

New hazardous waste management facility or *new facility* means a facility which began operation, or for which construction commenced after November 19, 1980. (See also "Existing hazardous waste management facility".)

New tank system or *new tank component* means a tank system or component that will be used for the storage or treatment of hazardous waste and for which installation has commenced after July 14, 1986; except, however, for purposes of 264.193(g)(2) and 265.193(g)(2), a new tank system is one for which construction commences after July 14, 1986. (See also "existing tank system".)

On ground tank means a device meeting the definition of "tank" in 260.10 and that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface so that external tank bottom cannot be visually inspected.

On-site means the same or geographically contiguous property which may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a crossroads intersection, and access is by crossing as opposed to going along, the right-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way which he controls and to which the public does not have access, is also considered on-site property.

Open burning means the combustion of any material without the following characteristics:

(1) Control of combustion air to maintain adequate temperature for efficient combustion.
(2) Containment of the combustion-reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion, and
(3) Control of emission of the gaseous combustion products. (See also "incineration" and "thermal treatment".)

Operator means the person responsible for the overall operation of a facility.

Owner means the person who owns a facility or part of a facility.

Partial closure means the closure of a hazardous waste management unit in accordance with the applicable closure requirements of Parts 264 and 265 of this chapter at a facility that contains other active hazardous waste management units. For example, partial closure may include the closure of a tank (including its associated piping and underlying containment systems), landfill cell, surface impoundment, waste pile, or other hazardous waste management unit, while other units of the same facility continue to operate.

"Person" See G.S. 130A-290

Personnel or *facility personnel* means all persons who work at, or oversee the operations of, a hazardous waste facility, and whose actions or failure to act may result in noncompliance with the requirements of Parts 264 or 265 of this Chapter.

Pesticide means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant, other than any article that:

(1) Is a new animal drug under FFDCA section 201(w), or
(2) Is an animal drug that has been determined by regulation of the secretary of Health and Human Services not to be a new animal drug, or

(3) Is an animal feed under FFDCA section 201(x) that bears or contains any substances described by paragraph (1) or (2) of this definition.

Pile means any non-containerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage and that is not a containment building.

Plasma arc incinerator means any enclosed device using a high intensity electrical discharge or arc as a source of heat followed by an afterburner using controlled flame combustion and which is not listed as an industrial furnace.

Point source means 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, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

Publicly owned treatment works or *"POTW"* means any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a "State" or "municipality" [as defined by Section 502(4) of the CWA]. This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

Qualified Ground-Water Scientist means a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering, and has sufficient training and experience in ground-water hydrology and related fields as may be demonstrated by state registration, professional certifications, or completion of accredited university courses that enable that individual to make sound professional judgements regarding ground-water monitoring and contaminant fate and transport.

Regional Administrator means the Regional Administrator for the EPA Region in which the facility is located, or his designee.

Remediation waste means all solid and hazardous wastes, and all media (including groundwater, surface water, soils, and sediments) and debris, which contain listed hazardous wastes or which themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing corrective action requirements under Section 264.101 and RCRA section 3008(h). For a given facility, remediation wastes may originate only from within the facility boundary, but may include waste managed in implementing RCRA sections 3004(v) or 3008(h) for releases beyond the facility boundary.

Replacement unit means a landfill, surface impoundment, or waste pile unit (1) from which all or substantially all of the waste is removed, and (2) that is subsequently reused to treat, store, or dispose of hazardous waste. "Replacement unit" does not apply to a unit from which waste is removed during closure, if the subsequent reuse solely involves the disposal of waste from that unit and other closing units or corrective action areas at the facility, in accordance with an approved closure plan or EPA or State approved corrective action.

Representative sample means a sample of a universe or whole (e.g., waste pile, lagoon, ground water) which can be expected to exhibit the average properties of the universe or whole.

Run-off means any rainwater, leachate, or other liquid that drains over land from any part of a facility.

Run-on means any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

Saturated zone or *zone of saturation* means that part of the earth's crust in which all voids are filled with water.

"Sludge" **See G.S. 130A-290**

Sludge dryer means any enclosed thermal treatment device that is used to dehydrate sludge and that has a maximum total thermal input, excluding the heating value of the sludge itself, of 2,500 Btu/lb of sludge treated on a wet-weight basis.

Small Quantity Generator means a generator who generates less than 1000 kg of hazardous waste in a calendar month.

Solid waste means a solid waste as defined in Section 261.2 of this Chapter.

Sorbent means a material that is used to soak up free liquids by either adsorption or absorption, or both. *Sorb* means to either adsorb or absorb, or both.

State means any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

"Storage" **See G.S. 130A-290**

Sump means any pit or reservoir that meets the definition of tank and those troughs/trenches connected to it that serves to collect hazardous waste for transport to hazardous waste storage, treatment, or disposal facilities; except that as used in the landfill, surface impoundment, and waste pile rules, "sump" means any lined pit or reservoir that serves to collect liquids drained from a leachate collection and removal system or leak detection system for subsequent removal from the system.

Surface impoundment or *impoundment* means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid wastes or wastes

containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.

Tank means a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support.

Tank System means a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system.

Thermal treatment means the treatment of hazardous waste in a device which uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. Examples of thermal treatment processes are incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge. (See also "incinerator" and "open burning".)

Thermostat means a temperature control device that contains metallic mercury in an ampule attached to a bi-metal sensing element, and mercury-containing ampules that have been removed from these temperature control devices in compliance with the requirements of 40 CFR 273.13(c)(2) or 273.33(c)(2).

Totally enclosed treatment facility means a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which 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 means 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.

Transport vehicle means a motor vehicle or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (trailer, railroad freight car, etc.) is a separate transport vehicle.

Transportation means the movement of hazardous waste by air, rail, highway, or water.

Transporter means a person engaged in the offsite transportation of hazardous waste by air, rail, highway, or water.

Treatability Study means a study in which a hazardous waste is subjected to a treatment process to determine:

(1) Whether the waste is amenable to the treatment process,
(2) what pretreatment (if any) is required,
(3) the optimal process conditions needed to achieve the desired treatment,
(4) the efficiency of a treatment process for a specific waste or wastes, or
(5) the characteristics and volumes of residuals from a particular treatment process. Also included in this definition for the purpose of the Section 261.4(e) and (f) exemptions are liner compatibility, corrosion, and other material compatibility studies and toxicological and health effects studies. A "treatability study" is not a means to commercially treat or dispose of hazardous waste.

"Treatment" **See G.S. 130A-290**

Treatment Zone means a soil area of the unsaturated zone of a land treatment unit within which hazardous constituents are degraded, transformed, or immobilized.

Underground injection means the subsurface emplacement of fluids through a bored, drilled or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension. (See also "injection well".)

Underground tank means a device meeting the definition of "tank" in 260.10 whose tire surface area is totally below the surface of and covered by the ground.

Unfit for use tank system means a tank system that has been determined through an integrity assessment or other inspection to be no longer capable of storing or treating hazardous waste without posing a threat of release of hazardous waste to the environment.

United States means the 50 states, the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

Universal Waste means any of the following hazardous wastes that are managed under the universal waste requirements of 40 CFR part 273:

(1) Batteries as described in 40 CFR 273.2;
(2) Pesticides as described in 40 CFR 273.3; and
(3) Thermostats as described in 40 CFR 273.4.

Universal Waste Handler:

(1) Means:
  (i) A generator (as defined in this section) of universal waste; or
  (ii) The owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination.
(2) Does not mean:

(i) A person who treats (except under the provisions of 40 CFR 273.13(a) or (c), or 273.33(a) or (c)), disposes of, or recycles universal waste; or

(ii) A person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

Universal Waste Transporter means a person engaged in the off-site transportation of universal waste by air, rail, highway, or water.

Unsaturated zone or "zone of aeration" means the zone between the land surface and the water table.

Uppermost aquifer means the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

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 contaminated by physical or chemical impurities.

Vessel includes every description of watercraft, used or capable of being used as a means of transportation on the water.

Wastewater treatment unit means a device which:

(1) Is part of a wastewater treatment facility that is subject to regulation under either Section 402 or Section 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 Section 261.3 of this chapter, or that generates and accumulates a wastewater treatment sludge which is a hazardous waste as defined in Section 261.3 of this chapter, or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in Section 261.3 of this chapter; and

(3) Meets the definition of tank or tank system in Section 260.10 of this chapter.

Water (bulk shipment) means the bulk transportation of hazardous waste which is loaded or carried on board a vessel without containers or labels.

Well means any shaft or pit dug or bored into the earth, generally of a cylindrical form, and often walled with bricks or tubing to prevent the earth from caving in.

Well injection: (See "underground injection").

Zone of engineering control means an area under the control of the owner/operator that, upon detection of a hazardous waste release, can be readily cleaned up prior to the release of hazardous waste or hazardous constituents to ground water or surface water.

(c) The following additional definitions shall apply throughout this Subchapter:

(1) "Section" means the Hazardous Waste Section, in the Division of Solid Waste Management, Department of Environment, Health, and Natural Resources.

(2) The "Department" means the N.C. Department of Environment, Health, and Natural Resources (DEHNR).

(3) "Division" means the Solid Waste Management Division (SWMD).

(4) "Long Term Storage" means the containment of hazardous waste for an indefinite period of time in a facility designed to be closed with the hazardous waste in place.

(5) "Off-site Recycling Facility" means any facility that receives shipments of hazardous waste from off-site to be recycled or processed for recycling through any process conducted at the facility, but does not include any facility owned or operated by a generator of hazardous waste solely to recycle their own waste.

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. September 1, 1979;
Amended Eff. June 1, 1989;
June 1, 1988; February 1, 1987; October 1, 1986;
October 1, 1985; July 1, 1985; April 1, 1985; October 1, 1984; April 1, 1984;
October 1, 1983; October 1, 1982; September 15, 1981; November 19, 1980;
Transferred and Recodified from 10 NCAC 10F .0002 Eff. April 4, 1990;
Amended Eff. April 1, 1993; October 1, 1990; August 1, 1990.
Recodified from 15A NCAC 13A .0002 Eff. December 20, 1996.

LAW-ARTICLE 9; WASTE MANAGEMENT LAW
FOR ADDITIONAL DEFINITIONS THAT APPLY SEE THE SOLID WASTE MANAGEMENT LAW IN PART II OF THIS PUBLICATION (G.S. 130A-290).

.0103 PETITIONS - PART 260

(a) All rulemaking petitions for changes in this Subchapter shall be made in accordance with 15A NCAC 24B .0001.

(b) 40 CFR 260.21 through 260.41 (Subpart C), "Rulemaking Petitions," have been incorporated by reference including subsequent amendments and editions.

SUBPART C - PETITIONS

260.21 Petitions for equivalent testing or analytical methods.

(a) Any person seeking to add a testing or analytical method to Part 261, 264, or 265 of this chapter may petition for a regulatory amendment under this section and section 260.20. To be successful, the person must demonstrate to the satisfaction of the Administrator that the proposed method is equal to or superior to the corresponding method prescribed in Part 261, 264, or 265 of this chapter, in terms of its sensitivity, accuracy, and precision (i.e., reproducibility).

(b) Each petition must include, in addition to the information required by section 260.20(b):
   (1) A full description of the proposed method, including all procedural steps and equipment used in the method;
   (2) A description of the types of wastes or waste matrices for which the proposed method may be used;
   (3) Comparative results obtained from using the proposed method with those obtained from using the relevant or corresponding methods prescribed in Part 261, 264, or 265 of this chapter;
   (4) An assessment of any factors which may interfere with, or limit the use of, the proposed method; and
   (5) A description of the quality control procedures necessary to ensure the sensitivity, accuracy and precision of the proposed method.

(c) After receiving a petition for an equivalent method, the Administrator may request any additional information on the proposed method which he may reasonably require to evaluate the method.

(d) If the Administrator amends the regulations to permit use of a new testing method, the method will be incorporated in "Test Methods for the Evaluation of Solid Waste: Physical/Chemical Methods," SW-846, U.S. Environmental Protection Agency, Office of Solid Waste, Washington, D.C. 20460.

260.22 Petition to amend Part 261 to exclude a waste produced at a particular facility.

(a) Any person seeking to exclude a waste at a particular generating facility from the lists in Subpart D of Part 261 may petition for a regulatory amendment under this section and Section 260.20. To be successful:
   (1) The petitioner must demonstrate to the satisfaction of the Administrator that the waste produced by a particular generating facility does not meet any of the criteria under which the waste was listed as a hazardous or an acutely hazardous waste; and
   (2) Based on a complete application, the Administrator must determine, where he has a reasonable basis to believe that factors (including additional constituents) other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste. A waste which is so excluded, however, still may be a hazardous waste by operation of Subpart C of Part 261.

(b) The procedures in this Section and Section 260.20 may also be used to petition the Administrator for a regulatory amendment to exclude from Section 261.3(a)(2)(ii) or (c), a waste which is described in these Sections and is either a waste listed in Subpart D, or is derived from a waste listed in Subpart D. This exclusion may only be issued for a particular generating, storage, treatment, or disposal facility. The petitioner must make the same demonstration as required by paragraph (a) of this section. Where the waste is a mixture of solid waste and one or more listed hazardous wastes or is derived from one or more hazardous wastes, his demonstration must be made with respect to the waste mixture as a whole; analyses must be conducted for not only those constituents for which the listed waste contained in the mixture was listed as hazardous, but also for factors (including additional constituents) that could cause the waste mixture to be a hazardous waste. A waste which is so excluded may still be a hazardous waste by operation of Subpart C of Part 261.

(c) If the waste is listed with codes "I", "C", "R", or "E", in Subpart D,

(1) The petitioner must show that the waste does not exhibit the relevant characteristic for which the waste was listed as defined in Section 261.21, Section 261.22, Section 261.23, or Section 261.24 using any applicable methods prescribed therein. The petitioner also must show that the waste does not exhibit any of the other characteristics defined in Section 261.21, Section 261.22, Section 261.23, or Section 261.24 using any applicable methods prescribed therein;

(2) Based on a complete application, the Administrator must determine, where he has a reasonable basis to believe that factors (including additional constituents) other than those for which the waste was listed could cause the waste to be hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste. A waste which is so excluded, however, still may be a hazardous waste by operation of Subpart C of Part 261.

(d) If the waste is listed with code "T" in Subpart D,

(1) The petitioner must demonstrate that the waste:

(i) Does not contain the constituent or constituents (as defined in Appendix VII of Part 261 of this chapter) that caused the Administrator to list the waste, using the appropriate test methods prescribed in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11; or

(ii) Although containing one or more of the hazardous constituents (as defined in Appendix VII of Part 261) that caused the Administrator to list the waste, does not meet the criterion of section 261.11(a)(3) when considering the factors used by the Administrator in Section 261.11(a)(3) (i) through (xi) under which the waste was listed as hazardous; and

(2) Based on a complete application, the Administrator must determine, where he has a reasonable basis to believe, that factors (including additional constituents) other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste; and

(3) The petitioner must demonstrate that the waste does not exhibit any of the characteristics defined in Section 261.21, Section 261.22, Section 261.23, and Section 261.24 using any applicable methods prescribed therein;

(4) A waste which is so excluded, however, still may be a hazardous waste by operation of Subpart C of Part 261.

(e) If the waste is listed with the code "H" in Subpart D,

(1) The petitioner must demonstrate that the waste does not meet the criterion of Section 261.11(a)(2); and

(2) Based on a complete application, the Administrator must determine, where he has a reasonable basis to believe that additional factors (including additional constituents) other than those for which the waste was listed could cause the waste to be a hazardous waste, that such factors do not warrant retaining the waste as a hazardous waste; and

(3) The petitioner must demonstrate that the waste does not exhibit any of the characteristics defined in Section 261.21, Section 261.22, Section 261.23, and Section 261.24 using any applicable methods prescribed therein;

(4) A waste which is so excluded, however, still may be a hazardous waste by operation of Subpart C of Part 261.

(f) [Reserved for listing radioactive wastes.]

(g) [Reserved for listed infectious wastes.]

(h) Demonstration samples must consist of enough representative samples, but in no case less than four samples, taken over a period of time sufficient to represent the variability or the uniformity of the waste.

(i) Each petition must include, in addition to the information required by Section 260.20(b):

(1) The name and address of the laboratory facility performing the sampling or tests of the waste;

(2) The names and qualifications of the persons sampling and testing the waste;

(3) The dates of sampling and testing;

(4) The location of the generating facility;

(5) A description of the manufacturing processes or other operations and feed materials producing the waste and an assessment of whether such processes, operations, or feed materials can or might produce a waste that is not covered by the demonstration;

(6) A description of the waste and an estimate of the average and maximum monthly and annual quantities of waste covered by the demonstration;

(7) Pertinent data on and discussion of the factors delineated in the respective criterion for listing a hazardous waste, where the demonstration is based on the factors in section 261.11(a)(3);

(8) A description of the methodologies and equipment used to obtain the representative samples;

(9) A description of the sample handling and preparation techniques, including techniques used for extraction, containerization and preservation of the samples;

(10) A description of the tests performed (including results);

(11) The names and model numbers of the instruments used in performing the tests; and
(12) The following statement signed by the generator of the waste or his authorized representative:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

(j) After receiving a petition for an exclusion, the Administrator may request any additional information which he may reasonably require to evaluate the petition.
(k) An exclusion will only apply to the waste generated at the individual facility covered by the demonstration and will not apply to waste from any other facility.
(1) The Administrator may exclude only part of the waste for which the demonstration is submitted where he has reason to believe that variability of the waste justifies a partial exclusion.

260.23 Petitions to amend 40 CFR part 273 to include additional hazardous wastes.

(a) Any person seeking to add a hazardous waste or a category of hazardous waste to the universal waste regulations of part 273 of this chapter may petition for a regulatory amendment under this section, 40 CFR 260.20, and subpart G of 40 CFR part 273.
(b) To be successful, the petitioner must demonstrate to the satisfaction of the Administrator that regulation under the universal waste regulations of 40 CFR part 273: Is appropriate for the waste or category of waste; will improve management practices for the waste or category of waste, and will improve implementation of the hazardous waste program. The petition must include the information required by 40 CFR 260.20(b). The petition should also address as many of the factors listed in 40 CFR 273.81 as are appropriate for the waste or category of waste addressed in the petition.
(c) The Administrator will grant or deny a petition using the factors listed in 40 CFR 273.81. The decision will be based on the weight of evidence showing that regulation under 40 CFR part 273 is appropriate for the waste or category of waste, will improve management practices for the waste or category of waste, and will improve implementation of the hazardous waste program.
(d) The Administrator may request additional information needed to evaluate the merits of the petition.

260.30 Variances from classification as a solid waste.

In accordance with the standards and criteria in Section 260.31 and the procedures in Section 260.33, the Administrator may determine on a case-by-case basis that the following recycled materials are not solid solid wastes:

(a) Materials that are accumulated speculatively without sufficient amounts being recycled (as defined in Section 261.1(c)(8) of this chapter);
(b) Materials that are reclaimed and then reused within the original production process in which they were generated; and
(c) Materials that have been reclaimed but must be reclaimed further before the materials are completely recovered.

260.31 Standards and criteria for variances from classification as a solid waste.

(a) The Administrator may grant requests for a variance from classifying as a solid waste those materials that are accumulated speculatively without sufficient amounts being recycled if the applicant demonstrates that sufficient amounts of the material will be recycled or transferred for recycling in the following year. If a variance is granted, it is valid only for the following year, but can be renewed, on an annual basis, by filing a new application. The Administrator's decision will be based on the following criteria:
(1) The manner in which the material is expected to be recycled, when the material is expected to be recycled, and whether this expected disposition is likely to occur (for example, because of past practice, market factors, the nature of the material, or contractual arrangements for recycling);
(2) The reason that the applicant has accumulated the material for one or more years without recycling 75 percent of the volume accumulated at the beginning of the year;

(3) The quantity of material already accumulated and the quantity expected to be generated and accumulated before the material is recycled;
(4) The extent to which the material is handled to minimize loss;
(5) Other relevant factors.

(b) The Administrator may grant requests for a variance from classifying as a solid waste those materials that are reclaimed and then reused as feedstock within the original production process in which the materials were generated if the reclamation operation is an essential part of the production process. This determination will be based on the following criteria:
(1) How economically viable the production process would be if it were to use virgin materials, rather than reclaimed materials;
(2) The prevalence of the practice on an industry-wide basis;
(3) The extent to which the material is handled before reclamation to minimize loss;
(4) The time periods between generating the material and its reclamation, and between reclamation and return to the original primary production process;
(5) The location of the reclamation operation in relation to the production process;
(6) Whether the reclaimed material is used for the purpose for which it was originally produced when it is returned to the original process, and whether it is returned to the process in substantially its original form;
(7) Whether the person who generates the material also reclaims it;
(8) Other relevant factors.

(c) The Regional Administrator may grant requests for a variance from classifying as a solid waste those materials that have been reclaimed but must be reclaimed further before recovery is completed if, after initial reclamation, the resulting material is commodity-like (even though it is not yet a commercial product, and has to be reclaimed further). This determination will be based on the following factors:
(1) The degree of processing the material has undergone and the degree of further processing that is required;
(2) The value of the material after it has been reclaimed;
(3) The degree to which the reclaimed material is like an analogous raw material;
(4) The extent to which an end market for the reclaimed material is guaranteed;
(5) The extent to which the reclaimed material is handled to minimize loss;
(6) Other relevant factors.

260.32 Variance to be classified as a boiler.

In accordance with the standards and criteria in Section 260.10 (definition of "boiler"), and the procedures in Section 260.33, the Administrator may determine on a case-by-case basis that certain enclosed devices using controlled flame combustion are boilers, even though they do not otherwise meet the definition of boiler contained in Section 260.10, after considering the following criteria:

(a) The extent to which the unit has provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases; and
(b) The extent to which the combustion chamber and energy recovery equipment are of integral design; and
(c) The efficiency of energy recovery, calculated in terms of the recovered energy compared with the thermal value of the fuel; and
(d) The extent to which exported energy is utilized; and
(e) The extent to which the device is in common and customary use as a "boiler" functioning primarily to produce steam, heated fluids, or heated gases; and
(f) Other factors, as appropriate.

260.33 Procedures for variances from classification as a solid waste or to be classified as a boiler.

The Administrator will use the following procedures in evaluating applications for variances from classification as a solid waste or applications to classify particular enclosed controlled flame combustion devices as boilers:
(a) The applicant must apply to the Administrator for the variance. The application must address the relevant criteria contained in Section 260.31 or Section 260.32.

(b) The Administrator will evaluate the application and issue a draft notice tentatively granting or granting or denying the application. Notification of this tentative decision will be provided by newspaper advertisement or radio broadcast in the locality where the recycler is located. The Administrator will accept comment on the tentative decision for 30 days, and may also hold a public hearing upon request or at his discretion. The Administrator will issue a final decision after receipt of comments and after the hearing (if any).

260.40 Additional regulation of certain hazardous waste recycling activities on a case-by-case basis.

(a) The Regional Administrator may decide on a case-by-case basis that persons accumulating or storing the recyclable materials described in Section 261.6(a)(2)(iv) of this Chapter should be regulated under Section 261.6 (b) and (c) of this chapter. The basis for this decision is that the materials are being accumulated or stored in a manner that does not protect human health and the environment because the materials or their toxic constituents have not been adequately contained, or because the materials being accumulated or stored together are incompatible. In making this decision, the Regional Administrator will consider the following factors:
(1) The types of materials accumulated or stored and the amounts accumulated or stored;
(2) The method of accumulation or storage;
(3) The length of time the materials have been accumulated or stored before being reclaimed;
(4) Whether any contaminants are being released into the environment, or are likely to be so released; and
(5) Other relevant factors.
The procedures for this decision are set forth in Section 260.41 of this chapter.

260.41 Procedures for case-by-case regulation of hazardous waste recycling activities.

The Regional Administrator will use the following procedures when determining whether to regulate hazardous waste recycling activities described in Section 261.6(a)(2)(iv) under the provisions of Section 261.6 (b) and (c), rather than under the provisions of Subpart F of Part 266 of this Chapter.

(a) If a generator is accumulating the waste, the Regional Administrator will issue a notice setting forth the factual basis for the decision and stating that the person must comply with the applicable requirements of Subparts A, C, D, and E of Part 262 of this chapter. The notice will become final within 30 days, unless the person served requests a public hearing to challenge the decision. Upon receiving such a request, the Regional Administrator will hold a public hearing. The Regional Administrator will provide notice of the hearing to the public and allow public participation at the hearing. The Regional Administrator will issue a final order after the hearing stating whether or not compliance with Part 262 is required. The order becomes effective 30 days after service of the decision unless the Regional Administrator specifies a later date or unless review by the Administrator is requested. The order may be appealed to the Administrator by any person who participated in the public hearing. The Administrator may choose to grant or to deny the appeal. Final Agency action occurs when a final order is issued and Agency review procedures are exhausted.
(b) If the person is accumulating the recyclable material as a storage facility, the notice will state that the person must obtain a permit in accordance with all applicable provisions of Parts 270 and 124 of this chapter. The owner or operator of the facility must apply for a permit within no less than 60 days and no more than six months of notice, as specified in the notice. If the owner or operator of the facility wishes to challenge the Regional Administrator's decision, he may do so in his permit application, in a public hearing held on the draft permit, or in comments filed on the draft permit or on the notice of intent to deny the permit. The fact sheet accompanying the permit will specify the reasons for the Agency's determination. The question of whether the Regional Administrator's decision was proper will remain open for consideration during the public comment period discussed under Section 124.11 of this chapter and in any subsequent hearing.

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. November 19, 1980;
Amended Eff. June 1, 1988; May 1, 1987; January 1, 1986;
October 1, 1985; July 1, 1985; October 1, 1983; October 1, 1982;
September 15, 1981.
Transferred and Recodified from 10 NCAC 10F .0028 Eff. April 4, 1990.
Amended Eff. April 1, 1993; October 1, 1990;
Recodified from 15A NCAC 13A .0003 Eff. December 20, 1996.

.0104 PUBLIC INFORMATION - PART 2

(a) The provisions concerning requests for information in 40 CFR 2.100 to 2.120 (Subpart A) have been incorporated by reference including subsequent amendments and editions, except that 40 CFR 2.100 (a) is not incorporated by reference.

(1) The following shall be substituted for the provisions of 40 CFR 2.100(a) which are not incorporated by reference:

(2) Definitions.

(A) "EPA" means the United States Environmental Protection Agency.

(B) "Department of Environment, Health, and Natural Resources" shall be substituted for "Environmental Protection Agency" and "Hazardous Waste Section Chief in the Solid Waste Management Division of the Department of the Department of Environment, Health, and Natural Resources" shall be substituted for "Administrator", "Regional Administrator" and "Director", except in those situations where authority has not been delegated to the State of N.C. or unless the context requires a different meaning.

(C) "Section" means the N.C. Hazardous Waste Section, in the Division of Solid Waste Management, Department of Environment, Health, and Natural Resources.

(D) "Section Officer" means the person designated by the Section Chief to do this activity.

(E) "Section Attorney" means the person designated by the Section Chief to do this activity.

(F) "Section Officer" shall be substituted for the freedom of information officer.

(G) "N.C. Hazardous Waste Section Public Affairs Director" shall be substituted for the EPA Director of the Office of Public Affairs.

(H) "N.C. Hazardous Waste Section Office" shall be substituted for Regional EPA Office or/EPA Branch Office.

(I) "Department" means N.C. Department of Environment, Health, and Natural Resources.

(J) "Section Employee" shall be substituted for EPA Employee.

(K) "Section Legal Office" shall be the Section Attorney.

(b) The provisions concerning confidentiality of business information in 40 CFR 2.201 to 2.309 (Subpart B) have been incorporated by reference including subsequent amendments and editions, except that 40 CFR 2.209(b) and (c), 2.301, 2.302, 2.303 2.304, 2.306, 2.307, 2.308 and 2.309 are not incorporated by reference.

SUBPART A -- REQUESTS FOR INFORMATION

2.100 Definitions.

(a) See 15A NCAC 13A Part 2, Rule .0104(a).

(b) *EPA record* or, simply, *record* means any document, writing, photograph, sound or magnetic recording, drawing, or other similar thing by which information has been preserved, from which the information can be retrieved and copied, and over which EPA has possession or control. It may include copies of the records of other Federal agencies (see Section 2.111(d)). The term includes informal writings (such as, drafts, and the like), and also includes information preserved in a form which must be translated or deciphered by machine in order to be intelligible to humans. The term includes documents and the like which were created or acquired by EPA, its predecessors, its officers, and its employees by use of Government funds or in the course of transacting official business. However, the term does not include materials which are the personal records of an EPA officer or employee. Nor does the term include materials published by non-Federal organizations which are readily available to the public, such as books, journals, and periodicals available through reference libraries, even if such materials are in EPA's possession.

(c) *Request* means a request to inspect or obtain a copy of one or more records.

(d) *Requestor* means any person who has submitted a request to EPA.

(e) The term *commercial use request* refers to a request from or on behalf of one who seeks information for a use or purpose that furthers the commercial, trade or profit interests of the requestor or the person on whose behalf the request is made. In determining whether a requestor properly belongs in this category, EPA must determine the use to which a requestor will put the documents requested. Moreover, where EPA has reasonable cause to doubt the use to which a requestor will put the records sought, or where that use is not clear from the request itself, EPA may seek additional clarification before assigning the request to a specific category.

(f) The term *non-commercial scientific institution* refers to an institution that is not operated on a *commercial* basis as that term is referenced in paragraph (e) of this section, and which is operated solely for the purpose of conducting scientific research the results of which are not intended to promote any particular product or industry.

(g) The term *educational institution* refers to a preschool, a public or private elementary or secondary school, an institution of graduate higher education, an institution of undergraduate higher education, an institution or professional education, and an institution of vocational education, which operates a program or programs of scholarly research.

(h) The term *representative of the news media* refers to any person actively gathering news for an entity that is organized and operated to publish or broadcast news to the public. The term "news" means information that is about current events or that would be of current interest to the public. Examples of news media entities include television or radio stations broadcasting to the public at large, and publishers of periodicals (but only in those instances when they can qualify as disseminators of "news") who make their products available for purchase or subscription by the general public. These examples are not intended to be all-inclusive. Moreover, as traditional methods of news delivery evolve (e.g., electronic dissemination of newspapers through telecommunications services), such alternative media would be included in this category. In the case of "freelance" journalists, they may be regarded as working for a news organization if they can demonstrate a solid basis for expecting publication through that organization, even though not actually employed by it. A publication contract would be the clearest proof, but EPA may also look to the past publication record of a requestor in making this determination.

(i) The term *search* includes all time spent looking for material that is responsive to a request, including page-by-page or line-by-line identification of material within documents. Searching for material must be done in the most efficient and least expensive manner so as to minimize costs for both the EPA and the requestor. For example, EPA will not engage in line-by-line search when merely duplicating an entire document would prove the less expensive and quicker method of complying with a request. *Search* will be distinguished, moreover, from *review* of material in order to determine whether the material is exempt from disclosure (see paragraph (j) of this section). Searches may be done manually or by computer using existing programming.

(j) The term *review* refers to the process of examining documents located in response to a request that is for a commercial use (see paragraph (e) of this section) to determine whether any portion of any document located is permitted to be withheld. It also includes processing any documents for disclosure, e.g., doing all that is necessary to excise them and otherwise prepare them for release. Review does not include time spent resolving legal or policy issues regarding the application of exemptions. (Documents must be reviewed in responding to all requests; however, review time may only be charged to Commercial Use Requesters.)

(k) The term *duplication* refers to the process of making a copy of a document necessary to respond to an FOIA request. Such copies can take the form of paper copy, microform, audiovisual materials, or machine readable documentation (e.g., magnetic tape or disk), among others. The copy provided must be in a form that is reasonably usable by requesters.

2.101 Policy on disclosure of EPA records.

(a) EPA will make the fullest possible disclosure of records to the public, consistent with the rights of individuals to privacy, the rights of persons in business information entitled to confidential treatment, and the need of EPA to promote frank internal policy deliberations and to pursue its official activities without undue disruption.

(b) All EPA records shall be available to the public unless they are exempt from the disclosure requirements of 5 U.S.C. 552.

(c) All nonexempt EPA records shall be available to the public upon request regardless of whether any justification or need for such records has been shown by the requestor.

(d) When documents responsive to a request are maintained for distribution by agencies operating statutory-based fee schedule programs, such as, but not limited to, the Government Printing Office or the National Technical Information Service, EPA will inform the requester of the steps necessary to obtain records from the sources.

2.102 [Reserved]

2.103 Partial disclosure of records.

If a requested record contains both exempt and nonexempt material, the nonexempt material shall be disclosed, after the exempt material has been deleted in accordance with Section 2.119.

2.104 Requests to which this subpart applies.

(a) This subpart applies to any written request (other than a request made by another Federal agency) received by any EPA office, whether or not the request cites the Freedom of Information Act, 5 U.S.C. 552. See Sections 2.107(a) and Section 2.112(b) regarding the treatment of requests which are directed by the requestor to offices other than those listed in Section 2.106.
(b) Any written request to EPA for existing records prepared by EPA for routine public distribution, e.g., pamphlets, copies of speeches, press releases, and educational materials, shall be honored. No individual determination under Section 2.111 is necessary in such cases, since preparation of the records for routine public distribution itself constitutes a determination that the records are available to the public.

2.105 Existing records.

(a) The Freedom of Information Act, 5 U.S.C. 552, does not require the creation of new records in response to a request, nor does it require EPA to place a requestor's name on a distribution list for automatic receipt of certain kinds of records as they come into existence. The Act establishes requirements for disclosure of existing records.
(b) All existing EPA records are subject to routine destruction according to standard record retention schedules.

2.106 Where requests for agency records shall be filed.

(a) A request for records may be filed with the Freedom of Information Officer, Hazardous Waste Section, Waste Management Division, Box 29603, Raleigh, N.C. 27611-9603.
(b) Freedom of information office indicated above.

2.107 Misdirected written requests; oral requests.

(a) EPA cannot assure that a timely or satisfactory response under this subpart will be given to written requests that are addressed to EPA offices, officers, or employees other than the Freedom of Information Officers listed in Section 2.106. Any EPA officer or employee who receives a written request for inspection or disclosure of EPA records shall promptly forward a copy of the request to the appropriate Freedom of Information Officer, by the fastest practicable means, and shall, if appropriate, commence action under Section 2.111.
(b) While EPA officers and employees will attempt in good faith to comply with requests for inspection or disclosure of EPA records made orally, by telephone or otherwise, such oral requests are not required to be processed in accordance with this subpart.

2.108 Form of request.

A request shall be made in writing, shall reasonably describe the records sought in a way that will permit their identification and location, and should be addressed to the addressee set forth in Section 2.106, but otherwise need not be in any particular form.

2.109 Requests which do not reasonably describe records sought.

(a) If the description of the records sought in the request is not sufficient to allow EPA to identify and locate the requested records, the EPA office taking action under Section 2.111 will notify the requestor (by telephone when practicable) that the request cannot be further processed until additional information is furnished.

(b) EPA will make every reasonable effort to assist in the identification and description of records sought and to assist the requestor in formulating his request. If a request is described in general terms (e.g., all records having to do with a certain area), the EPA office taking action under Section 2.111 may communicate with the requestor (by telephone when practicable) with a view toward reducing the administrative burden of processing a broad request and minimizing the fees payable by the requestor. Such attempts will not be used as a means to discourage requests, but rather as a means to help identify with more specificity the records actually sought.

2.110 Responsibilities of Freedom of Information Officers.

(a) Upon receipt of a written request, the Freedom of Information Officer (whether at EPA Headquarters or at an EPA region) shall mark the request with the date of receipt, and shall attach to the request a control slip indicating the date of receipt, the date by which response is due, a unique Request Identification Number, and other pertinent administrative information. The Freedom of Information Officer shall retain a file copy of the request and control slip, and shall monitor the handling of the request to ensure a timely response.

(b) The Freedom of Information Officer shall maintain a file concerning each request received, which shall contain a copy of the request, initial and appeal determinations, and other pertinent correspondence and records.

(c) The Freedom of Information Officer shall collect and maintain the information necessary to compile the reports required by 5 U.S.C. 552(d).

2.111 Action by office responsible for responding to request.

(a) Whenever an EPA office becomes aware that it is responsible for responding to a request, the office shall:

(1) Take action under Section 2.109, if required, to obtain a better description of the records requested;
(2) Locate the records as promptly as possible, or determine that the records are not known to exist.
(3) When appropriate, take action under Section 2.120(c) to obtain payment or assurance of payment;
(4) If any located records contain business information, as defined in Section 2.201(c), comply with Subpart B of this part;
(5) Determine which of the requested records legally must be withheld, and why (see Section 2.119(b));
(6) Of the requested records which are exempt from mandatory disclosure but which legally may be disclosed (see Section 2.119(a)), determine which records will be withheld, and why;
(7) Issue all initial determinations within the allowed period (see Section 2.112), specifying (individually or by category) which records will be disclosed and which will be withheld, and signed by a person authorized to issue the determination under Section 2.113(b). Denials of requests shall comply with Section 2.113; and
(8) Furnish the appropriate Freedom of Information Officer a copy of the determination. If the determination denied a request for one or more existing, located records, the responding office shall also furnish the Freedom of Information Officer the name, address, and telephone number of the EPA employee(s) having custody of the records, and shall maintain the records in a manner permitting their prompt forwarding the the General Counsel upon request if an appeal from the initial denial is filed. See also Section 2.204(f). Reserved

2.112 Time allowed for issuance of initial determination.

(a) Except as otherwise provided in this section, not later than the tenth working day after the date of receipt by a Freedom of Information Office of a request for records, the EPA office responsible for responding to the request shall issue a written determination to the requestor stating which of the requested records will, and which will not, be released, and the reason for any denial of a request.

(b) The period of 10 working days shall be measured from the date the request is first received and logged in by the Headquarters or Regional Freedom of Information Office.

(c) There shall be excluded from the period of 10 working days (or any extension thereof) any time which elapses between the date that a requestor is notified by EPA under Section 2.109 that his request does not reasonably identify the records sought, and the date that the requestor furnishes a reasonable identification.

(d) There shall be excluded from the period of 10 working days (or any extension thereof) any time which elapses between the date that a requestor is notified by EPA under Section 2.120 that prepayment of fees is required, and the date that the requestor pays (or makes suitable arrangements to pay) such charges.

(e) The EPA office taking action under Section 2.111, after notifying the appropriate Freedom of Information Office, may extend the basic 10-day period established under subsection (a) of this section by a period not to exceed 10 additional working days, by furnishing written notice to the requestor within the basic 10-day period stating the reason for such extension and the date by which the office expects to be able to issue a determination. The period may be so extended only when absolutely necessary, only for the period required, and only when one or more of the following unusual circumstances require the extension:
   (1) There is a need to search for and collect the requested records from field facilities or other establishments that are separate from the office processing the request:
   (2) There is a need to search for, collect, and appropriately examine a voluminous amount of separate and distinct records which are demanded in a single request; or
   (3) There is a need for consultation, which shall be conducted with all practicable speed, with another agency having a substantial interest in the determination of the request or among two or more components of EPA.

(f) Failure of EPA to issue a determination within the 10-day period or any authorized extension shall constitute final agency action which authorizes the requestor to commence an action in an appropriate Federal district court to obtain the records.

2.113 Initial denials of requests.

(a) An initial denial of a request may be issued only for the following reasons:
   (1) The record requested is not known to exist;
   (2) The record is not in EPA's possession;
   (3) The record has been published in the Federal Register or is otherwise published and available for sale;
   (4) A statutory provision, provision of this part, or court order requires that the information not be disclosed;
   (5) The record is exempt from mandatory disclosure under 5 U.S.C. 552(b) and EPA has decided that the public interest would not be served by disclosure;
   (6) Section 2.204(d)(1) requires initial denial because a third person must be consulted in connection with a business confidentiality claim; or
   (7) The record is believed to exist in EPA's possession but has not yet been located (see paragraph (h) of this section).

(b) Assistant Administrators, heads of headquarters staff offices, and Regional Administrators and are delegated the authority to issue initial determinations. This authority may be redelegated; provided, that the authority to issue initial denials of requests for existing located records (other than denials based solely on Section 2.204(d)(1)) may be redelegated only by the Section Chief.

(c) [Reserved]

(d) (1) Each initial determination to deny a request shall be written, signed, and dated, and, except as provided in paragraph (d)(2), shall contain a reference to the Request Identification Number, shall identify the records that are being withheld (individually, or, if the denial covers a large number of similar records, by described category), and shall state the basis for denial for each record or category of records being withheld.
   (2) No initial determination shall reveal the existence or nonexistence of records if identifying the mere fact of the existence or nonexistence of those records would reveal confidential business information, confidential personal information or classified national security information. Instead of identifying the existence or nonexistence of the records, the initial determination shall state that the request is denied because either the records do not exist or they are exempt from mandatory disclosure under the applicable provision of 5 U.S.C. 552(b). No such determination shall be made without the concurrence of the General Counsel or his designee. The General Counsel has designated the Contracts and Information Law Branch to act on these requests for concurrence. See 2.121 for guidance on initial determinations denying, in limited circumstances, the existence of certain law enforcement records or information.

(e) If the decision to deny a request is made by an authorized EPA employee other than the person signing the determination letter, that other person's identity and position shall be stated in the determination letter.

(f) Each initial determination which denies, in whole or in part, a request for one or more existing, located EPA records (including determinations described in Section 2.113(d)(2) of this section) shall state that the requestor may appeal the initial denial by sending a written appeal to the address shown in Section 2.106(a) within 30 days after receipt of the determination. An initial determination which only denies the existence of records, however, will not include a notice of appeal rights.

(g) A determination shall be deemed issued on the date the determination letter is placed in EPA mailing channels for first class mailing to the requestor, delivered to the U.S. Postal Service for mailing, or personally delivered to the requestor, whichever date first occurs.

(h) When a request must be denied because the record has not yet been located (although it is believed to exist in EPA's possession), the EPA office responsible for maintaining the record shall continue to search diligently until it is located or it appears that the record does not exist or is not in EPA's possession, and shall periodically inform the requestor of the office's progress.

2.114 Appeals from initial denials; manner of making.

(a) Any person whose request has been denied in whole or in part by an initial determination may appeal that denial by addressing a written appeal to the address shown in Section 2.106(a).

(b) An appeal should be mailed no later than 30 calendar days after the date the requestor received the initial determination on the request. An untimely appeal may be treated either as a timely appeal or as a new request, at the option of the Freedom of Information Officer.

(c) The appeal letter shall contain a reference to the Request Identification Number (RIN), the date of the initial determination, and the name and address of the person who issued the initial denial. The appeal letter shall also indicate which of the records to which access was denied are the subjects of the appeal.

2.115 Appeal determinations; by whom made.

(a) The General Counsel shall make one of the following legal determinations in connection with every appeal from the initial denial of a request for an existing, located record:
  (1) The record must be disclosed;
  (2) The record must not be disclosed, because a statute or a provision of this part so requires; or
  (3) The record is exempt from mandatory disclosure but legally may be disclosed as a matter of Agency discretion.

(b) Whenever the General Counsel has determined under paragraph (a)(3) of this section that a record is exempt from mandatory disclosure but legally may be disclosed and the record has not been disclosed by EPA, the matter shall be referred to the Director of the EPA Office of Public Awareness. If the Director of the EPA Office of Public Awareness determines that the public interest would not be served by disclosure, a determination denying the appeal shall be issued by the General Counsel. If the Director of the EPA Office of Public Awareness determines that the public interest would be served by disclosure, the record shall be disclosed unless the Administrator (upon a review of the matter requested by the appropriate Assistant Administrator, Regional Administrator, or the Director of a Headquarters Staff Office) determines that the public interest would not be served by disclosure, in which case the General Counsel shall issue a determination denying the appeal.

(c) The General Counsel may delegate his authority under paragraph (a) of this section to a Regional Counsel or to any other attorney employed on a full-time basis by EPA, in connection with any category of appeals or any individual appeal.

2.116 Contents of determination denying appeal.

(a) Except as provided in paragraph (b) of this section, each determination denying an appeal from an initial denial shall be in writing, shall state which of the exemptions in 5 U.S.C. 552(b) apply to each requested existing record, and shall state the reason(s) for denial of the appeal. A denial determination shall also state the name and position of each EPA officer or employee who directed that the appeal be denied. Such a determination shall further state that the person whose request was denied may obtain de novo judicial review of the denial by complaint filed with the district court of the United States in the district in which the complainant resides, or has his principal place of business, or in which the Agency records are situated, or in the District of Columbia, pursuant to 5 U.S.C. 552(a)(4).

(b) No determination denying an appeal shall reveal the existence or nonexistence of records if identifying the mere fact of the existence or nonexistence of those records would reveal confidential business information,

confidential personal information or classified national security information. Instead of identifying the existence or nonexistence of the records, the determination shall state that the appeal is denied because either the records do not exist or they are exempt from mandatory disclosure under the applicable provision of 5 U.S.C. 552(b).

2.117 Time allowed for issuance of appeal determination.

(a) Except as otherwise provided in this section, not later than the twentieth working day after the date of receipt by the Freedom of Information Officer at EPA Headquarters of an appeal from an initial denial of a request for records, the General Counsel shall issue a written determination stating which of the requested records (as to which an appeal was made) shall be disclosed and which shall not be disclosed.

(b) The period of 20 working days shall be measured from the date an appeal is first received by the Freedom of Information Officer at EPA Headquarters, except as otherwise provided in Section 2.205(a).

(c) The Office of General Counsel, after notifying the Freedom of Information Officer at EPA Headquarters, may extend the basic 20-day period established under subsection (a) of this section by a period not to exceed 10 additional working days, by furnishing written notice to the requestor within the basic 20-day period stating the reasons for such extension and the date by which the office expects to be able to issue a determination. The period may be so extended only when absolutely necessary, only for the period required, and only when one or more of the following unusual circumstances require the extensions:
   (1) There is a need to search for and collect the records from field facilities or other establishments that are separate from the office processing the appeal;
   (2) There is a need to search for, collect, and appropriately examine a voluminous amount of separate and distinct records which are demanded in a single request; or
   (3) There is a need for consultation, which shall be conducted with all practicable speed, with another agency having a substantial interest in the determination of the request or among two or more components of EPA.

(d) No extension of the 20-day period shall be issued under subsection (c) of this section which would cause the total of all such extensions and of any extensions issued under Section 2.112(e) to exceed 10 working days.

2.118 Exemption categories.

(a) 5 U.S.C 552(b) establishes nine exclusive categories of matters which are exempt from the mandatory disclosure requirements of 5 U.S.C. 552(a). No request under 5 U.S.C. 552 for an existing, located record in EPA's possession shall be denied by any EPA office or employee unless the record contains (or its disclosure would reveal) matters that are:
   (2) Related solely to the internal personnel rules and practices of an agency;
   (3) Specifically exempted from disclosure by statute (other than 5 U.S.C. 552(b)): Provided, that such statute:
      (i) Requires that the matters be withheld from the public in such a manner as to leave no discretion on the issue; or
      (ii) Establishes particular criteria for withholding or refers to particular types of matters to be withheld.
   (4) Trade secrets and commercial or financial information obtained from a person and privileged or confidential (see Subpart B);
   (5) Interagency or intra-agency memorandums or letters which would not be available by law to a party other than an agency in litigation with the agency;
   (6) Personnel and medical files and similar files the disclosure of which would constitute a clearly unwarranted invasion of personal privacy;
   (7) (i) Records or information compiled for law enforcement purposes, but only to the extent that the production of such law enforcement records or information:
      (A) Could reasonably be expected to interfere with enforcement proceedings;
      (B) Would deprive a person of a right to a fair trial or an impartial adjudication;
      (C) Could reasonably be expected to constitute an unwarranted invasion of personal privacy;
      (D) Could reasonably be expected to disclose the identity of a confidential source, including a State, local or foreign agency or authority or any private institution which furnished information on a confidential basis, and, in the case of a record or information compiled by a criminal law enforcement authority in the course of a criminal investigation, or by

an agency conducting a lawful national security intelligence investigation, information furnished by a confidential source;

(E) Would disclose techniques and procedures for law enforcement investigations or prosecutions, or would disclose guidelines for law enforcement investigations or prosecutions if such disclosure could reasonably be expected to risk circumvention of the law; or

(F) Could reasonably be expected to endanger the life or physical safety of any individual.

(ii) [Reserved]

(8) Contained in or related to examination, operating, or condition reports prepared by, on behalf of, or for the use of an agency responsible for the regulation or supervision of financial institutions; or

(9) Geological and geophysical information and data, including maps, concerning wells.

(b) The fact that the applicability of an exemption permits the withholding of a requested record (or portion thereof) does not necessarily mean that the record must or should be withheld. See Section 2.119.

2.119 Discretionary release of exempt documents.

(a) An EPA office may, at its discretion, release requested records despite the applicability of one or more of the exemptions listed in Section 2.118 (a)(2), (a)(5), or (a)(7). Disclosure of such records is encouraged if no important purpose would be served by withholding the records.

(b) As a matter of policy, EPA will not release a requested record if EPA has determined that one or more of the exemptions listed in Section 2.118(a) (1), (3), (4), (6), (8), or (9), applies to the record, except when ordered to do so by a Federal court or in exceptional circumstances under appropriate restrictions with the approval of the Office of General Counsel or a Regional Counsel.

2.120 Fees, payment; waiver.

(a) Fee schedule. Requesters shall be charged the full allowable direct costs incurred by the Agency in responding to a FOIA request. However, if EPA uses a contractor to search for, reproduce or disseminate records responsive to a request, the cost to the requester shall not exceed the cost of the Agency itself performing the service.

(1) There are four categories of requests. Fees for each of the categories will be charged as follows:

(i) Commercial use requests. If the request seeks disclosure of records for a commercial use, the requester shall be charged for the time spent searching for the requested record, reviewing the record to determine whether it should be disclosed and for the cost of each page of duplication. Commercial use requesters should note that EPA also may charge fees to them for time spent searching for and/or reviewing records, even if EPA fails to locate the records or if the records located are determined to be exempt from disclosure.

(ii) Requests from an educational or non-commercial scientific institution whose purpose is scholarly or scientific research, involving a request which is not for a commercial use and seeks disclosure of records. In the case of such a request, the requester shall be charged only for the duplication cost of the records, except that the first 100 pages of duplication shall be furnished without charge.

(iii) Requests from a representative of the news media, involving a request which is not for a commercial use and seeks disclosure of records. In the case of such a request, the requester shall be charged only for the duplication cost of the records, except that the first 100 pages of duplication shall be furnished without charge.

(iv) All other requests. If the request seeks disclosure of records other than as described in paragraphs (a)(1)(i),(ii), and (iii) of this section, the requester shall be charged the full cost of search and duplication. However, the first two hours of search time (or its cost equivalent) and the first 100 pages of duplication (or their cost equivalent) shall be furnished without charge. Requestors in the "all other requests" category should note that EPA also may charge fees to them for time spent searching for records, even if EPA fails to locate the records or if the records located are determined to be exempt from disclosure.

(2) The determination of a requester's fee category will be based on the following:

(i) Commercial use requesters: The use to which the requester will put the documents requested;

(ii) Educational and non-commercial scientific institution requesters: Identity of the requester and the use to which the requester will put the documents requested:

(iii) Representatives of the news media requesters: the identity of the requester and the use to which the requester will put the documents requested.

(3) Fees will be charged to requesters, as appropriate, for search, duplication and review of requested records in accordance with the following schedule:

(i) Manual search for records.

(A) EPA Employees: For each 1/2 hour or portion thereof:

(1) GS-8 and below: $ 4.00

(2) GS-9 and above: $10.00, plus.

(B) Contractor employees: The requester will be charged for actual charges up to but not exceeding the rate which would have been charged had EPA employees conducted the search.

(ii) Computer search for records charges will consist of:

(A) EPA employee operators: For each 1/2 hour or portion thereof:

(1) GS-8 and below: $ 4.00

(2) GS-9 and above: $10.00, plus.

(B) Contractor operators: Requesters will be charged for the actual charges up to but not exceeding the rate which would have been charged had EPA employees conducted the search (see paragraph (a)(3)(i)(A) of this section), plus.

(C) Actual computer resource usage charges for this search.

(iii) Review of records. For each 1/2 hour or portion thereof [EPA employees]:

(A) GS-8 and below: $ 4.00

(B) GS-9 and above: $10.00

(iv) Duplication or reproduction of records.

(A) Duplication or reproduction of documents by EPA employees (paper copy of paper original): $.15 per page.

(B) Computer printouts (other than those calculated in a direct-cost billing-see paragraph (a)(3)(ii) of this section "Computer search for records") $.15 per page.

(C) Other methods of duplication or reproduction, including, but not limited to, duplication of photographs, microfilm and magnetic tape, will be charged at the actual direct cost to EPA.

(4) Other charges.

(i) Other charges incurred in responding to a request including but not limited to, special handling or transportation of records, will be charged at the actual direct cost to EPA.

(ii) Certification or authentication of records; $25.00 per certification or authentication.

(5) No charge shall be made-

(i) For the cost of preparing or reviewing letters of response to a request or appeal:

(ii) For time spent resolving legal or policy issues concerning the application of exemptions;

(iii) For search time and the first 100 pages of duplication for requests described in 2.120(a)(1)(ii) and (iii) of this section.

(iv) For the first two hours of search time (or its cost equivalent) and for the first 100 pages of duplication for requests described in 2.120(a)(1)(iv) of this section;

(v) If the total fee in connection with a request is less than $25.00, or if the costs of collecting the fee would otherwise exceed the amount of the fee. However, when EPA reasonably believes that a requester or group of requesters is attempting to break a request down into a series of requests for the purpose of avoiding the assessment of fees, EPA will aggregate such requests to determine the total fee, and will charge accordingly;

(vi) For responding to a request by an individual for one copy of a record retrievable by the requesting individual's name or personal identifier from a Privacy Act system of records;

(vii) For furnishing records requested by either House of Congress, or by a duly authorized committee or subcommittee of Congress, unless the records are requested for the benefit of an individual Member of Congress or for a constituent;

(viii) For furnishing records requested by and for the official use of other Federal agencies; or

(ix) For furnishing records needed by an EPA contractor, subcontractor, or grantee to perform the work required by the EPA contract or grant.

(b) Method of payment.

All fee payments shall be in the form of a check or money order payable to the "U.S. Environmental Protection Agency" and shall be sent (accompanied by a reference to the pertinent Request Identification Number(s)) to the appropriate Headquarters or Regional Office lock box address:

(1) EPA - Washington Headquarters, P.O. Box 360277M, Pittsburgh, PA 15251;

(2) EPA - Region 1, P.O. Box 360197M, Pittsburgh, PA 15251;

(3) EPA - Region 2, P.O. Box 360188M, Pittsburgh, PA 15251;
(4) EPA - Region 3, P.O. Box 360515M, Pittsburgh, PA 15251;
(5) EPA - Region 4, P.O. Box 100142, Atlanta, GA, 30384;
(6) EPA - Region 5, P.O. Box 70753, Chicago, IL 60673;
(7) EPA - Region 6, P.O. Box 360582M, Pittsburgh, PA 15251;
(8) EPA - Region 7, P.O. Box 360748M, Pittsburgh, PA 15251;
(9) EPA - Region 8, P.O. Box 360859M, Pittsburgh, PA 15251;
(10) EPA - Region 9, P.O. Box 360863M, Pittsburgh, PA 15251;
(11) EPA - Region 10, P.O. Box 360903M, Pittsburgh, PA 15251;

Under the Debt Collection Act of 1982 (Pub.L. 97-365), payment (except for prepayment) shall be due within thirty (30) calendar days after the date of billing. If payment is not received at the end of thirty calendar days, interest and a late payment handling charge will be assessed. In addition, under this Act, a penalty charge will be applied on any principal amount not paid within ninety (90) calendar days after the due date for payment. By the authority of the Debt Collection Act of 1982, delinquent amounts due may be collected through administrative offset or referred to private collection agencies. Information related to delinquent accounts may also be reported to the appropriate credit agencies.

(c) Assurance of payment.

(1) If an EPA office estimates that the fees for processing a request (or aggregated requests as described in 2.120(a)(5)(vi) of this section) will exceed $25.00, that office need not search for, duplicate or disclose records in response to the request(s) until the requester assures payment of the total amount of fees estimated to become due under this section. In such cases, the EPA office will promptly inform the requester (by telephone it practicable) of the need to make assurance of payment.

(2) An EPA office may not require a requester to make an advance payment, i.e. payment before work is commenced or continued on a request, unless;

(i) A requester has previously failed to pay a fee charged in a timely fashion (i.e., within 30 days after the date of the billing), or

(ii) The EPA office estimates or determines that the allowable charges that a requester may be required to pay are likely to exceed $250.00. Then the EPA office will notify the requester of the likely cost and obtain satisfactory assurance of full payment where the requester has a history of prompt payment of FOIA fees, or require an advance payment of an amount up to the full estimated charges in the case of requesters with no history of payment. If such advance payment is not received within 30 days after EPA's billing, the request will not be processed and the request will be closed. See also 2.112(d).

(d) Reduction or waiver of fee.

(1) The fee chargeable under this section shall be reduced or waived by EPA if the Agency determines that disclosure of the information:

(i) Is in the public interest because it is likely to contribute significantly to public understanding of the operations or activities of the government; and

(ii) Is not primarily in the commercial interest of the requester.

(2) Both of these requirements must be satisfied before fees properly assessable can be waived or reduced.

(3) The Agency will employ the following four factors in determining whether the first requirement has been met;

(i) The subject of the request: Whether the subject of the requested records concerns " the operations or activities of the government";

(ii) The informative value of the information to be disclosed: Whether the disclosure is "likely to contribute to an understanding of government operations or activities";

(iii) The contribution to an understanding of the subject by the general public likely to result from disclosure: Whether disclosure of the requested information will contribute to "public understanding"; and

(iv) The significance of the contribution to public understanding: Whether disclosure is likely to contribute "significantly" to public understanding of government operations or activities.

(4) The Agency will employ the following factors in determining whether the second requirement has been met:

(i) The existence and magnitude of a commercial interest: Whether the requester has a commercial interest that would be furthered by the requested disclosure; and, if so

(ii) The primary interest in disclosure: Whether the magnitude of the identified commercial interest of the requester is sufficiently large, in comparison with the public interest in disclosure, that disclosure is "primarily in the commercial interest of the requester."

(5) In all cases, the burden shall be on the requester to present information in support of a request for a waiver of fees. A request for reduction or waiver of fees should include:
   (i) A clear statement of the requester's interest in the requested documents:
   (ii) The use proposed for the documents and whether the requester will derive income or other benefit from such use;
   (iii) A statement of how the public will benefit from such use and from the release of the requested documents; and
   (iv) If specialized use of the documents or information is contemplated, a statement of the requester's qualifications that are relevant to the specialized use.

(6) A request for reduction or waiver of fees shall be addressed to the appropriate Freedom of Information Officer. The requester shall be informed in writing of the Agency's decision whether to grant or deny the fee waiver or fee reduction request. This decision may be appealed by letter addressed to the EPA Freedom of Information Officer. The General Counsel shall decide such appeals. The General Counsel may redelegate this authority only to the Deputy General Counsel or the Associate General Counsel for Grants, Contracts and General Law.

(e) The Financial Management Office shall maintain a record of all fees charged requesters for searching for, reviewing and reproducing requested records under this section. If after the end of 60 calendar days from the date on which request for payment was made the requester has not submitted payment to the appropriate EPA billing address (as listed in 2.120(b), the Financial Management Division shall place the requester's name on a delinquent list which is sent to the EPA Freedom of Information Officer. If a requester whose name appears on the delinquent list makes a request under this part, the EPA Freedom of Information Officer shall inform the requester that EPA will not process the request until the requester submits payment of the overdue fee from the earlier request. Any request made by an individual who specifies an affiliation with or representation of a corporation, association, law firm, or other organization shall be deemed to be a request by the corporation, association, law firm, or other organization. If an organization placed on the delinquent list can show that the person who made the request for which payment was overdue did not make the request on behalf of the organization the organization will be removed from the delinquent list but the name of the individual shall remain on the list. A requester shall not be placed on the delinquent list if a request for a reduction or for a waiver is pending under paragraph (d) of this section.

2.121 Exclusions

(a) Whenever a request is made which involves access to records described in 2.118(a)(7)(i)(A), and
   (1) The investigation or proceeding involves a possible violation of criminal law; and
   (2) There is a reason to believe that the subject of the investigation or proceeding is not aware of its pendency, and disclosure of the existence of such records could reasonably be expected to interfere with enforcement proceedings, EPA shall, during only such time as the circumstances continue, treat the records as not subject to the requirements of 5 U.S.C. 552 and this subpart.

(b) Whenever informant records maintained by the Agency under an informant's name or personal identifier are requested by a third party according to the informant's name or personal identifier and the informant's status as an informant has not been officially confirmed, EPA shall treat the records as not subject to the requirements of 5 U.S.C. 552 and this subpart.

(c) No determination relying on this section shall be issued without the concurrence of the General Counsel or his designee. The General Counsel has designated the Contracts and information Law Branch to act on these requests for concurrence.

(d) An initial determination which only relies on this section will not include notice of appeal rights.

(b) The provision concerning confidentiality of business information in 40 CFR 2.201 to 2.309 (Subpart B) have been incorporated by reference including subsequent amendments and editions, except that 40 CFR 2.209 (b) and (c), 2.301, 2.302, 2.303, 2.304, 2.306, 2.307, 2.308 and 2.309 are not incorporated by reference.

SUBPART B -- CONFIDENTIALITY OF BUSINESS INFORMATION

2.201 Definitions.

For the purposes of this subpart:

(a) *Person* means an individual, partnership, corporation, association, or other public or private organization or legal entity, including Federal, State or local governmental bodies and agencies and their employees.

(b) *Business* means any person engaged in a business, trade, employment, calling or profession, whether or not all or any part of the net earnings derived from such engagement by such person inure (or may lawfully inure) to the benefit of any private shareholder or individual.

(c) *Business information* (sometimes referred to simply as "information") means any information which pertains to the interests of any business, which was developed or acquired by that business, and (except where the context otherwise requires) which is possessed by EPA in recorded form.

(d) *Affected business* means, with reference to an item of business information, a business which has asserted (and not waived or withdrawn) a business confidentiality claim covering the information, or a business which could be expected to make such a claim if it were aware that disclosure of the information to the public was proposed.

(e) *Reasons of business confidentiality* include the concept of trade secrecy and other related legal concepts which give (or may give) a business the right to preserve the confidentiality of business information and to limit its use or disclosure by others in order that the business may obtain or retain business advantages it derives from its rights in the information. The definition is meant to encompass any concept which authorizes a Federal agency to withhold business information under 5 U.S.C. 552(b)(4), as well as any concept which requires EPA to withhold information from the public for the benefit of a business under 18 U.S.C. 1905 or any of the various statutes cited in Section 2.301 through Section 2.309.

(f) [Reserved]

(g) Information which is *available to the public* is information in EPA's possession which EPA will furnish to any member of the public upon request and which EPA may make public, release or otherwise make available to any person whether or not its disclosure has been requested.

(h) *Business confidentiality claim* (or, simply, *claim*) means a claim or allegation that business information is entitled to confidential treatment for reasons of business confidentiality, or a request for a determination that such information is entitled to such treatment.

(I) *Voluntarily submitted information* means business information in EPA's possession.

(1) The submission of which EPA had no statutory or contractual authority to require; and

(2) The submission of which was not prescribed by statute or regulation as a condition of obtaining some benefit (or avoiding some disadvantage) under a regulatory program of general applicability, including such regulatory programs as permit, licensing, registration, or certification programs, but excluding programs concerned solely or primarily with the award or administration by EPA of contracts or grants.

(j) *Recorded* means written or otherwise registered in some form for preserving information, including such forms as drawings, photographs, videotape, sound recordings, punched cards, and computer tape or disk.

(k) [Reserved]

(l) *Administrator, Regional Administrator, General Counsel, Regional Counsel,* and *Freedom of Information Officer* mean the EPA officers or employees occupying the positions so titled.

(m) *EPA office* means any organizational element of EPA, at any level or location. (The term "EPA office" and "EPA Legal office" are used in this subpart for the sake of brevity and ease of reference. When this subpart requires that an action be taken by an "EPA office" or by an "EPA legal office," it is the responsibility of the officer or employee in charge of that office to take the action or ensure that it is taken.)

(n) *EPA legal office* means the EPA General Counsel and any EPA office over which the General Counsel exercises supervisory authority, including the various Officer of Regional Counsel. (See paragraph (m) of this section.)

(o) A *working day* is any day on which Federal government offices are open for normal business, Saturdays, Sundays, and official Federal holidays are not working days; all other days are.

2.202 Applicability of subpart; priority where provisions conflict; records containing more than one kind of information.

(a) Section 2.201 Through 2.215 establish basic rules governing business confidentiality claims, the handling by EPA of business information which is or may be entitled to confidential treatment, and determinations by EPA of whether information is entitled to confidential treatment for reasons of business confidentiality.

(b) Various statutes (other than 5 U.S.C. 552) under which EPA operates contain special provisions concerning the entitlement to confidential treatment of information gathered under such statutes. Section 2.301 through 2.309 prescribe special rules for treatment of certain categories of business information obtained under the various statutory provisions. Paragraph (b) of each of those sections should be consulted to determine whether any of those sections applies to the particular information in question.

(c) The basic rules of Sections 2.201 through 2.215 govern except to the extent that they are modified or supplanted by the special rules of Sections 2.301 through 2.309. In the event of a conflict between the provisions of the basic rules and those of a special rule which is applicable to the particular information in question, the provision of the special rule shall govern.

(d) If two or more of the sections containing special rules apply to the particular information in question, and the applicable sections prescribe conflicting special rules for the treatment of the information, the rule which provides greater or wider availability to the public of the information shall govern.

(e) For most purposes, a document or other record may usefully be treated as a single unit of "information," even though in fact the document or record is comprised of a collection of individual items of information. However, in applying the provisions of this subpart, it will often be necessary to separate the individual items of information into two or more categories, and to afford different treatment to the information in each such category. The need for differentiation of this type may arise, e.g., because a business confidentiality claim covers only a portion of a record, or because only a portion of the record is eligible for confidential treatment. EPA offices taking action under this subpart must be alert to this problem.

(f) In taking actions under this subpart, EPA offices should consider whether it is possible to obtain the affected business's consent to disclosure of useful portions of records while protecting the information which is or may be entitled to confidentiality (e.g., by withholding such portions of a record as would identify a business, or by disclosing data in the form of industry-wide aggregates, multi-year averages or totals, or some similar form).

(g) This subpart does not apply to questions concerning entitlement to confidential treatment or information which concerns an individual solely in his personal, as opposed to business, capacity.

2.203 Notice to be included in EPA requests, demands, and forms; method of asserting business confidentiality claim; effect of failure to assert claim at time of submission.

(a) *Notice to be included in certain requests and demands for information, and in certain forms.* Whenever an EPA office makes a written request or demand that a business furnish information which, in the office's opinion, is likely to be regarded by the business as entitled to confidential treatment under this subpart, or whenever an EPA office prescribes a form for use by businesses in furnishing such information, the request, demand, or form shall include or enclose a notice which:

(1) States that the business may, if it desires, assert a business confidentiality claim covering part or all of the information, in the manner described by paragraph (b) of this section, and that information covered by such a claim will be disclosed by EPA only to the extent, and by means of the procedures, set forth in this subpart;

(2) States that if no such claim accompanies the information when it is received by EPA, it may be made available to the public by EPA without further notice to the business; and

(3) Furnishes a citation of the location of this subpart in the code of Federal Regulations and the Federal Register.

(b) *Method and time of asserting business confidentiality claim.* A business which is submitting information to EPA may assert a business confidentiality claim covering the information by placing on (or attaching to) the information, at the time it is submitted to EPA, a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as "trade secret," "proprietary," or "company confidential." Allegedly confidential portions of otherwise non-confidential documents should be clearly identified by the business, and may be submitted separately to facilitate identification and handling by EPA. If the business desires confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state.

(c) *Effect of failure to assert claim at time of submission of information.* If information was submitted by a business to EPA on or after October 1, 1976, in response to an EPA request or demand (or on an EPA-prescribed form) which contained the substance of the notice required by paragraph (a) of this section, and if no business confidentiality claim accompanied the information when it was received by EPA, the inquiry to the business normally required by Section 2.204(c)(2) need not be made. If a claim covering the information is received after the information itself is received, EPA will make such efforts as are administratively practicable to associate the late claim with copies of the previously submitted information in EPA files (see Section 2.204(c)(1)). However, EPA cannot assure that such efforts will be effective, in light of the possibility of prior disclosure or widespread prior dissemination of the information.

2.204 Initial action by EPA office.

(a) *Situations requiring action.* This section prescribes procedures to be used by EPA offices in making initial determinations of whether business information is entitled to confidential treatment for reasons of business confidentiality. Action shall be taken under this section whenever an EPA office:

(1) Learns that it is responsible for responding to a request under 5 U.S.C. 552 for the release of business information; in such a case, the office shall issue an initial determination within the period specified in Section 2.112;

(2) Desires to determine whether business information in its possession is entitled to confidential treatment, even though no request for release of the information has been received; or

(3) Determines that it is likely that EPA eventually will be requested to disclose the information at some future date and thus will have to determine whether the information is entitled to confidential treatment. In such a case this section's procedures should be initiated at the earliest practicable time, in order to increase the time available for preparation and submission of comments and for issuance of determinations, and to make easier the task of meeting response deadlines if a request for release of the information is later received under 5 U.S.C. 552.

(b) *Previous confidentiality determination.* The EPA office shall first ascertain whether there has been a previous determination, issued by a Federal court or by an EPA legal office acting under this subpart, holding that the information in question is entitled to confidential treatment for reasons of business confidentiality.

(1) If such a determination holds that the information is entitled to confidential treatment, the EPA Office shall furnish any person whose request for the information is pending under 5 U.S.C. 552 an initial determination (see Section 2.111 and Section 2.113) that the information has previously been determined to be entitled to confidential treatment, and that the request is therefore denied. The office shall furnish such person the appropriate case citation or EPA determination. If the EPA office believes that a previous determination which is issued by an EPA legal office may be improper or no longer valid, the office shall so inform the EPA legal office, which shall consider taking action under section 2.205(h).

(2) With respect to all information not known to be covered by such a previous determination, the EPA office shall take action under paragraph (c) of this section.

(c) *Determining existence of business confidentiality claims.*

(1) Whenever action under this paragraph is required by paragraph (b)(2) of this section, the EPA office shall examine the information and the office's records to determine which business, if any, are affected businesses (see Section 2.201(d)), and to determine which business if any, have asserted business confidentiality claims which remain applicable to the information. If any business is found to have asserted an applicable claim, the office shall take action under paragraph (d) of this section with respect to each such claim.

(2)(i) If the examination conducted under paragraph (c)(1) of this section discloses the existence of any business which, although it has not asserted a claim, might be expected to assert a claim if it know EPA proposed to disclose the information, the EPA office shall contact a responsible official of each such business to learn whether the business asserts a claim covering the information. However, no such inquiry need be made to any business:

(A) Which failed to assert a claim covering the information when responding to an EPA request or demand, or supplying information on an EPA form, which contained the substance of the statements prescribed by Section 2.203(a);

(B) Which otherwise failed to assert a claim covering the information after being informed by EPA that such failure could result in disclosure of the information to the public; or

(C) Which has otherwise waived or withdrawn a claim covering the information.

(ii) If a request for release of the information under 5 U.S.C. 552 is pending at the time inquiry is made under this paragraph (c)(2), the inquiry shall be made by telephone or equally prompt means, and the responsible official contacted shall be informed that any claim the business wishes to assert must be

brought to the EPA office's attention no later than the close of business on the third working day after such inquiry.

(iii) A record shall be kept of the results of any inquiry under this paragraph (c)(2). If any business makes a claim covering the information, the EPA office shall take further action under paragraph (d) of this section.

(3) If, after the examination under paragraph (c)(1) of this section, and after any inquiry made under paragraph (c)(2) of this section, the EPA office knows of no claim covering the information and the time for response to any inquiry has passed, the information shall be treated for purposes of this subpart as not entitled to confidential treatment.

(d) *Preliminary determination.* Whenever action under this paragraph is required by paragraph (c)(1) or (c)(2) of this section on any business's claim, the EPA Office shall make a determination with respect to each such claim. Each determination shall be made after consideration of the provisions of Section 2.203, the applicable substantive criteria in Section 2.208 or elsewhere in this subpart, and any previously issued determinations under this subpart which are applicable.

(1) If, in connection with any business's claim, the office determines that the information may be entitled to confidential treatment, the office shall:

(i) Furnish the notice of opportunity to submit comments prescribed by paragraph (e) of this section to each business which is known to have asserted an applicable claim and which has not previously been furnished such notice with regard to the information in question;

(ii) Furnish, to any whose request for release of the information is pending under 5 U.S.C. 552, a determination (in accordance with Section 2.113) that the information may be entitled to confidential treatment under this subpart and 5 U.S.C. 552(b)(4), that further inquiry by EPA pursuant to this subpart is required before a final determination on the request can be issued, that the person's request is therefore initially denied, and that after further inquiry a final determination will be issued by an EPA legal office; and

(iii) Refer the matter to the appropriate EPA legal office, furnishing the information required by paragraph (f) of this section.

(2) If, in connection with all applicable claims, the office determines that the information clearly is not entitled to confidential treatment, the office shall take the actions required by Section 2.205(f). However, if a business has previously been furnished notice under section 2.205(f) with respect to the same information, no further notice need to be furnished to that business. A copy of each notice furnished to a business under this paragraph (d)(2) and Section 2.205(f) shall be forwarded promptly to the appropriate EPA legal office.

(e) *Notice to affected businesses; opportunity to comment.*

(1) Whenever required by paragraph (d)(1) of this section, the EPA office shall promptly furnish each business a written notice stating that EPA is determining under this subpart whether the information is entitled to confidential treatment, and affording the business an opportunity to comment. The notice shall be furnished by certified mail (return receipt requested), by personal delivery, or by other means which allows verification of the fact and date of receipt. The notice shall state the address of the office to which the business's comments shall be addressed (the appropriate EPA legal office, unless the General Counsel has directed otherwise), the time allowed for comments, and the method for requesting a time extension under Section 2.205(b)(2). The notice shall further state that EPA will construe a business's failure to furnish timely comments as a waiver of the business's claim.

(2) If action under this section is occasioned by a request for the information under 5 U.S.C. 552, the period for comments shall be 15 working days after the date of the business's receipt of the written notice. In other cases, the EPA office shall establish a reasonable period for comments (not less than 15 working days after the business's receipt of the written notice). In all cases, the notice shall call the business's attention to the provisions of Section 2.205(b).

(3) At or about the time the written notice is furnished, the EPA office shall orally inform a responsible representative of the business (by telephone or otherwise) that the business should expect to receive the written notice, and shall request the business to contact the EPA office if the written notice has not been received within a few days, so that EPA may furnish a duplicate notice.

(4) The written notice required by paragraph (e)(1) of this section shall invite the business's comments on the following points (subject to paragraph (e)(5) of this section):

(i) The portions of the information which are alleged to be entitled to confidential treatment;

(ii) The period of time for which confidential treatment is desired by the business (e.g., until a certain date, until the occurrence of a specified event, or permanently);

(iii) The purpose for which the information was furnished to EPA and the approximate date of submission, if known;

(iv) Whether a business confidentiality claim accompanied the information when it was received by EPA;

(v) Measures taken by the business to guard against undesired disclosure of the information to others;

(vi) The extent to which the information has been disclosed to others, and the precautions taken in connection therewith;

(vii) Pertinent confidentiality determinations, if any, by EPA or other Federal agencies, and a copy of any such determination, or reference to it, if available;

(viii) Whether the business asserts that disclosure of the information would be likely to result in substantial harmful effects on the business' competitive position, and if so, what those harmful effects would be, why they should be viewed as substantial, and an explanation of the causal relationship between disclosure and such harmful effects; and

(ix) Whether the business asserts that the information is voluntarily submitted information as defined in Section 2.201(i), and if so, whether and why disclosure of the information would tend to lessen the availability to EPA of similar information in the future.

(5) To the extent that the EPA office already possesses the relevant facts, the notice need not solicit responses to the matters addressed in paragraphs (e)(4)(i) through (ix) of this section, although the notice shall request confirmation of EPA's understanding of such facts where appropriate.

(6) The notice shall refer to Section 2.205(c) and shall include the statement prescribed by Section 2.203(a).

(f) *Materials to be furnished to EPA legal office.* When a matter is referred to an EPA legal office under paragraph (d)(1) of this section, the EPA office taking action under this section shall forward promptly to the EPA legal office the following items:

(1) A copy of the information in question, or (where the quantity or form of the information makes forwarding a copy of the information impractical) representative samples, a description of the information, or both;

(2) A description of the circumstances and date of EPA's acquisition of the information;

(3) The name, address, and telephone number of the EPA employee(s) most familiar with the information;

(4) The name, address and telephone number of each business which asserts an applicable business confidentiality claim;

(5) A copy of each applicable claim (or the record of the assertion of the claim), and a description of when and how each claim was asserted;

(6) Comments concerning each business's compliance or noncompliance with applicable requirements of Section 2.203;

(7) A copy of any request for release of the information pending under 5 U.S.C. 552;

(8) The office's comments concerning the appropriate substantive criteria under this subpart, and information the office possesses concerning the information's entitlement to confidential treatment; and

(9) Copies of other correspondence or memoranda which pertain to the matter.

2.205 Final confidentiality determination by EPA legal office.

(a) *Role of EPA legal office*

(1) The appropriate EPA legal office (see paragraph (i) of this section) is responsible for making the final administrative determination of whether or not business information covered by a business confidentiality claim is entitled to confidential treatment under this subpart.

(2) When a request for release of the information under 5 U.S.C. 552 is pending, the EPA legal office's determination shall serve as the final determination on appeal from an initial denial of the request.

(i) If the initial denial was issued under Section 2.204(b)(1), a final determination by the EPA legal office is necessary only if the requestor has actually filed an appeal.

(ii) If the initial denial was issued under Section 2.204(d)(1), however, the EPA legal office shall issue a final determination in every case, unless the request has been withdrawn. (Initial denials under Section 2.204(d)(1) are of a procedural nature, to allow further inquiry into the merits of the matter, and a requestor is entitled to a decision on the merits.) If an appeal from such a denial has not been received by the EPA Freedom of Information Officer on the tenth working day after issuance of the denial, the matter shall be handled as if an appeal had been received on that day, for purposes of establishing a schedule for issuance of an appeal decision under Section 2.117 of this part.

(b) *Comment period; extensions; untimeliness as waiver of claim.*

(1) Each business which has been furnished the notice and opportunity to comment prescribed by Section 2.204(d)(1) and Section 2.204(e) shall furnish its comments to the office specified in the notice in a manner reasonably calculated to result in receipt of the comments by that office not later than the date specified for receipt in the notice (or the data established in lieu thereof under this section).

(2) The period for submission of comments may be extended if, before the comments are due, a request for an extension of the comment period is made by the business and approved by the EPA legal office. Except in extraordinary circumstances, the EPA legal office will not approve such an extension without the consent of any person whose request for release of the information under 5 U.S.C. 552 is pending.

(3) The period for submission of comments by a business may be shortened in the manner described in paragraph (g) of this section.

(4) If a business's comments have not been received by the specified EPA office on the date they are due, that office shall promptly inquire whether the business has complied with paragraph (b)(2) of this section. If the business has complied but the comments have been lost in transmission, duplicate comments shall be requested.

(c) *Confidential treatment of comments for business.* If information submitted to EPA by a business as part of its comments under this section pertains to the business's claim, is not otherwise possessed by EPA, and is marked when received in accordance with Section 2.203(b), it will be regarded by EPA as entitled to confidential treatment and will not be disclosed by EPA without the business's consent, unless its disclosure is duly ordered by a Federal court, notwithstanding other provisions of this subpart to the contrary.

(d) *Types of final determinations; matters to be considered.*

(1) If the EPA legal office finds that a business has failed to furnish comments under paragraph (b) of this section in a manner reasonably calculated to result in receipt of the comments not later than the date the comments were due, it shall determine that the business has waived its claim. If, after application of the preceding sentence, no claim applies to the information, the office shall determine that the information is not entitled to confidential treatment under this subpart and, subject to Section 2.210, is available to the public.

(2) In all other cases, the EPA legal office shall consider each business's claim and comments, the various provisions of this subpart, and previously issued determinations under this subpart which are pertinent, the materials furnished it under Section 2.204(f), and such other materials as it finds appropriate. With respect to each claim, the office shall determine whether or not the information is entitled to confidential treatment for the benefit of the business that asserted the claim, and the period of any such entitlement (e.g., until a certain date, until the occurrence of a specified event, or permanently), and shall take further action under paragraph (e) or (f) of this section, as a appropriate.

(3) Whenever the claims of two or more businesses apply to the same information, the EPA legal office shall take action appropriate under the particular circumstances to protect the interests of all persons concerned (including any person whose request for the information is pending under 5 U.S.C. 552).

(e) *Determination that information is entitled to confidential treatment.* If the EPA legal office determines that the information is entitled to confidential treatment for the full period requested by the business which made the claim, EPA shall maintain the information in confidence for such period, subject to paragraph (h) of this section, Section 2.209, and the other provisions of this subpart which authorize disclosure in specified circumstances, and the office shall so inform the business. If any person's request for the release of the information is then pending under 5 U.S.C. 552, the EPA legal office shall issue a final determination denying that request.

(f) *Determination that information is not entitled to confidential treatment; notice; waiting period; release of information.*

(1) Notice of denial (or partial denial) of a business confidentiality claim, in the form prescribed by paragraph (f)(2) of this section, shall be furnished:

(i) By the EPA office taking action under Section 2.204, to each business on behalf of which a claim has been made, whenever Section 2.204(d)(2) requires such notice; and

(ii) By the EPA legal office taking action under this section, to each business which as asserted a claim applicable to the information and which has furnished timely comments under paragraph (b) of this section, whenever the EPA legal office determines that the information is not entitled to confidential treatment under this subpart for the benefit of the business, or determines that the period of any entitlement to confidential treatment is shorter than that requested by the business.

(2) The notice prescribed by paragraph (f)(1) of this section shall be written, and shall be furnished by certified mail (return receipt requested), by personal delivery, or by other means which allows verification of the fact of receipt and the date of receipt. The notice shall state the basis for the determination, that it constitutes final agency action concerning the business confidentiality claim, and that such final agency action may be subject to judicial review under chapter 7 of title 5, United States Code. With respect to EPA's implementation of the determination, the notice shall state that (subject to section 2.210) EPA will make the information available to the public on the tenth working day after the date of the business's receipt of the written notice (or on such later date as is established in lieu thereof by the EPA legal office under paragraph (f)(3) of this section), unless the EPA legal office has

first been notified of the business's commencement of an action in a Federal court to obtain judicial review of the determination, and to obtain preliminary injunctive relief against disclosure. The notice shall further state that if such an action is timely commenced, EPA may nonetheless make the information available to the public (in the absence of an order by the court to the contrary), once the court has denied a motion for a preliminary injunction in the action or has otherwise upheld the EPA determination, or whenever it appears to the EPA legal office, after reasonable notice to the business, that the business is not taking appropriate measures to obtain a speedy resolution of the action. If the information has been found to be temporarily entitled to confidential treatment, the notice shall further state that the information will not be disclosed prior to the end of the period of such temporary entitlement to confidential treatment.

(3) The period established in a notice under paragraph (f)(2) of this section for commencement of an action to obtain judicial review may be extended if, before the expiration of such period, a request for an extension is made by the business and approved by the EPA legal office. Except in extraordinary circumstances, the EPA legal office will not approve such an extension without the consent of any person whose request for release of the information under 5 U.S.C. 552 is pending.

(4) After the expiration of any period of temporary entitlement to confidential treatment, a determination under this paragraph (f) shall be implemented by the EPA legal office by making the information available to the public (in the absence of a court order prohibiting disclosure) whenever:

(i) The period provided for commencement by a business of an action to obtain judicial review of the determination has expired with out notice to the EPA legal office of commencement of such an action;

(ii) The court, in a timely-commenced action, has denied the business' motion for a preliminary injunction, or has otherwise upheld the EPA determination; or

(iii) The EPA legal office, after reasonable notice has been provided to the business, finds that the business is not taking appropriate measures to obtain a speedy resolution of the timely-commenced action.

(5) Any person whose request for release of the information under 5 U.S.C. 552 is pending at the time notice is given under paragraph (f)(2) of this section shall be furnished a determination under 5 U.S.C. 552 stating the circumstances under which the information will be released.

(g) *Emergency situations.* If the General Counsel finds that disclosure of information covered by a claim would be helpful in alleviating a situation posing an imminent and substantial danger to public health or safety, he may prescribe and make known to interested persons such shorter comment period (paragraph (b) of this section), post-determination waiting period (paragraph (f) of this section), or both , as he finds necessary under the circumstances.

(h) *Modification of prior determinations.* A determination that information is entitled to confidential treatment for the benefit of a business, made under this subpart by an EPA legal office, shall continue in effect in accordance with its terms until an EPA legal office taking action under this section, or under Section 2.206 or Section 2.207, issues a final determination stating that the earlier determination no longer describes correctly the information's entitlement to confidential treatment because of change in the applicable law, newly-discovered or changed facts, or because the earlier determination was clearly erroneous. If an EPA legal office tentatively concludes that such an earlier determination is of questionable validity, it shall so inform the business, and shall afford the business an opportunity to furnish comments on pertinent issues in the manner described by Section 2.204(e) and paragraph (b) of this section. If, after consideration of any timely comments submitted by the business, the EPA legal office makes a revised final determination that the information is not entitled to confidential treatment, or that the period of entitlement to such treatment will end sooner than it would have ended under the earlier determination, the office will follow the procedure described in paragraph (f) of this section. Determinations under this section may be made only by, or with the concurrence of, the General Counsel.

(i) *Delegation and redelegation of authority.* Unless the General Counsel otherwise directs, or this subpart otherwise specifically provides, determinations and actions required by this subpart to be made or taken by an EPA legal office shall be made or taken by the appropriate Regional Counsel whenever the EPA office taking action under Section 2.204 or Section 2.206(b) is under the supervision of a Regional Administrator, and by the General Counsel in all other cases. The General Counsel may redelegate any or all of the authority under this subpart to any attorney employed by EPA on a full-time basis under the General Counsel's supervision. A Regional Counsel may redelegate any or all of his authority under this subpart to any attorney employed by EPA on a full-time basis under the Regional Counsel's supervision.

2.206 Advance confidentiality determinations.

(a) An advance determination under this section may be issued by an EPA legal office if:

(1) EPA has requested or demanded that a business furnish business information to EPA;
(2) The business asserts that the information, if submitted, would constitute voluntarily submitted information under Section 2.201(i);
(3) The business will voluntarily submit the information for use by EPA only if EPA first determines that the information is entitled to confidential treatment under this subpart; and
(4) The EPA office which desires submission of the information has requested that the EPA legal office issue a determination under this section.

(b) The EPA office requesting an advance determination under this section shall:
(1) Arrange to have the business furnish directly to the EPA legal office a copy of the information (or, where feasible, a description of the nature of the information sufficient to allow a determination to be made), as well as the business's comments concerning the matters addressed in Section 2.204(e)(4), excluding, however, matters addressed in Section 2.204 (e)(4)(iii) and (e)(4)(iv); and
(2) Furnish to the EPA legal office the materials referred to in Section 2.204(f) (3), (7), (8), and (9).

(c) In making a determination under this section, the EPA legal office shall first determine whether or not the information would constitute voluntarily submitted information under section 2.201(i). If the information would constitute voluntarily submitted information, the legal office shall further determine whether the information is entitled to confidential treatment.

(d) If the EPA legal office determines that the information would not constitute voluntarily submitted information, or determines that it would constitute voluntarily submitted information but would not be entitled to confidential treatment, it shall so inform the business and the EPA office which requested the determination, stating the basis of the determination, and shall return to the business all copies of the information which it may have received from the business (except that if a request under 5 U.S.C. 552 for release of the information is received while the EPA legal office is in possession of the information, the legal office shall retain a copy of the information, but shall not disclose it unless ordered by a Federal court to do so). The legal office shall not disclose the information to any other EPA office or employee and shall not use the information for any purpose except the determination under this section, unless otherwise directed by a Federal court.

(e) If the EPA legal office determines that the information would constitute voluntarily submitted information and that it is entitled to confidential treatment, it shall so inform the EPA office which requested the determination and the business which submitted it, and shall forward the information to the EPA office which requested the determination.

2.207 Class determinations.

(a) The General Counsel may make and issue a class determination under this section if he finds that:
(1) EPA possesses, or is obtaining, related items of business information;
(2) One or more characteristics common to all such items of information will necessarily result in identical treatment for each such item under one or more of the provisions in this subpart, and that it is therefore proper to treat all such items as a class for one or more purposes under this subpart; and
(3) A class determination would serve a useful purpose.

(b) A class determination shall clearly identify the class of information to which it pertains.

(c) A class determination may state that all of the information in the class:
(1) Is, or is not, voluntarily submitted information under Section 2.201(i);
(2) Is, or is not, governed by a particular section of this subpart, or by a particular set of substantive criteria under this subpart;
(3) Fails to satisfy one or more of the applicable substantive criteria, and is therefore ineligible for confidential treatment;
(4) Satisfies one or more of the applicable substantive criteria; or
(5) Satisfies one or more of the applicable substantive criteria during certain period, but will be ineligible for confidential treatment thereafter.

(d) The purpose of a class determination is simply to make known the Agency's position regarding the manner in which information within the class will be treated under one or more of the provisions of this subpart. Accordingly, the notice of opportunity to submit comments referred to in Section 2.204(d)(1)(ii) and Section 2.205(b), and the list of materials required to be furnished to the EPA legal office under Section 2.204(d)(1)(iii), may be modified to reflect the fact that the class determination has made unnecessary the submission of materials pertinent to one or more issues. Moreover, in appropriate cases, action based on the class determination may be taken under Section 2.204(b)(1), Section 2.204(d), Section 2.205(d), or Section 2.206. However, the existence of a class determination shall not, of itself, affect any right a business may have to receive any notice under Section 2.204(d)(2) or Section 2.205(f).

2.208 Substantive criteria for use in confidentiality determinations.

Determinations issued under Sections 2.204 through 2.207 shall hold that business information is entitled to confidential treatment for the benefit of a particular business if:

(a) The business has asserted a business confidentiality claim which has not expired by its terms, nor been waived nor withdrawn;

(b) The business has satisfactorily shown that it has taken reasonable measures to protect the confidentiality of the information, and that it intends to continue to take such measures;

(c) The information is not, and has not been, reasonably obtainable without the business's consent by other persons (other than governmental bodies) by use of legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding);

(d) No statute specifically requires disclosure of the information; and

(e) Either:

(1) The business has satisfactorily shown that disclosure of the information is likely to cause substantial harm to the business's competitive position; or

(2) The information is voluntarily submitted information (see Section 2.201(i)), and its disclosure would be likely to impair the Government's ability to obtain necessary information in the future.

2.209 Disclosure in special circumstances.

(a) *General.* Information which, under this subpart, is not available to the public may nonetheless be disclosed to the person, and in the circumstances, described by paragraphs (d) through (f) of this section. (This section shall not be construed to restrict the disclosure of information which has been determined to be available to the public. However, business information for which a claim of confidentiality has been asserted shall be treated as being entitled to confidential treatment until there has been a determination in accordance with the procedures of this subpart that the information is not entitled to confidential treatment).

(b) **See 15A NCAC 13A Part 2, Rule .0104(b)**

(c) **See 15A NCAC 13A Part 2, Rule .0104(b)**

(d) *Court-ordered disclosure.* EPA may disclose any business information in any manner and to the extent ordered by a Federal court. Where possible, and when not in violation of a specific directive from the court, the EPA office disclosing information claimed as confidential or determined to be confidential shall provide as much advance notice as possible to each affected business of the type of information to be disclosed and to whom it is to be disclosed, unless the affected business has actual notice of the court order. At the discretion of the office, subject to any restrictions by the court, such notice may be given by notice in the Federal Register, letter sent by certified mail return receipt requested, or telegram.

(e) *Disclosure within EPA.* An EPA office, officer, or employee may disclose any business information to another EPA office, officer, or employee with an official need for the information.

(f) *Disclosure with consent of business.* EPA may disclose any business information to any person if EPA has obtained the prior consent of each affected business to such disclosure.

2.210 Nondisclosure for reasons other than business confidentiality or where disclosure is prohibited by other statute.

(a) Information which is not entitled to confidential treatment under this subpart shall be made available to the public (using the procedures set forth in Sections 2.204 and 2.205) if its release is requested under 5 U.S.C. 552, unless EPA determines (under Subpart A of this part) that, for reasons other than reasons of business confidentiality, the information is exempt from mandatory disclosure and cannot or should not be made available to the public. Any such determination under subpart A shall be coordinated with actions taken under this subpart for the purpose of avoiding delay in responding to requests under 5 U.S.C. 552.

(b) Notwithstanding any other provision of this subpart, if any statute not cited in this subpart appears to require EPA to give confidential treatment to any business information for reasons of business confidentiality, the matter shall be referred promptly to an EPA legal office for resolution. Pending resolution, such information shall be treated as if it were entitled to confidential treatment.

2.211 Safeguarding of business information; penalty of wrongful disclosure.

(a) No EPA officer or employee may disclose, or use for his or her private gain or advantage, any business information which came into his or her possession, or to which he or she gained access, by virtue of his or her official position or employment, except as authorized by this subpart.

(b) Each EPA officer or employee who has custody or possession of business information shall take appropriate measures to properly safeguard such information and to protect against its improper disclosure.

(c) Violation of paragraphs (a) or (b) of this section shall constitute grounds for dismissal, suspension, fine, or other adverse personnel action. Willful violation of paragraph (a) of this section may result in criminal prosecution under 18 U.S.C. 1905 or other applicable statute.

(d) Each contractor or subcontractor with EPA, and each employee of such contractor or subcontractor, who is furnished business information by EPA under Sections 2.301(h), 2.302(h), 2.304(h), 2.305(h), 2.306(j), 2.307(h), or Section 2.308(i), shall use or disclose that information only as permitted by the contract or subcontract under which the information was furnished. Any violation of this paragraph shall constitute grounds for debarment or suspension of the contractor or contractor's employee in question. Willful violation of this paragraph may result in criminal prosecution.

2.212 Establishment of control offices for categories of business information.

(a) The administrator, by order, may establish one or more mutually exclusive categories of business information, and may designate for each such category an EPA office (hereinafter referred to as a "control office") which shall have responsibility for taking actions (other than actions required to be taken by an EPA legal office) with respect to all information within such category.

(b) If a control office has been assigned responsibility for a category of business information, no other EPA office, officer, or employee may make available to the public (or otherwise disclose to persons other than EPA officers and employees) any information in the category without first obtaining the concurrence of the control office. Requests under 5 U.S.C. 552 for release of such information shall be referred to the control office.

(c) A control office shall take the actions and make the determinations required by Section 2.204 with respect to all information in any category for which the control office has been assigned responsibility.

(d) A control office shall maintain a record of the following, with respect to items of business information in categories for which it has been assigned responsibility:
  (1) Business confidentiality claims;
  (2) Comments submitted in support of claims;
  (3) Waivers and withdrawals of claims;
  (4) Actions and determinations by EPA under this subpart;
  (5) Actions by Federal courts; and
  (6) Related information concerning business confidentiality.

2.213 Designation by business of addressee for notices and inquiries.

(a) A business which wishes to designate a person or office as the proper addressee of communications from EPA to the business under this subpart may do so by furnishing in writing to the Freedom of Information Officer (A-101), Environmental Protection Agency, 401 M St. SW., Washington, D.C. 20460, the following information: the name and address of the business making the designation; the name, address, and telephone number of the designated person or office; and a request that EPA inquiries and communications (oral and written) under this subpart, including inquiries and notices which require reply within deadlines if the business is to avoid waiver of its rights under this subpart, be furnished to the designee pursuant to this section. Only one person or office may serve at any one time as a business's designee under this subpart.

(b) If a business has named a designee under this section, the following EPA inquiries and notices to the business shall be addressed to the designee:
  (1) Inquiries concerning a business's desire to assert a business confidentiality claim, under Section 2.204(c)(2)(i)(A);
  (2) Notices affording opportunity to substantiate confidentiality claims, under Section 2.204(d)(1) and Section 2.204(e);
  (3) Inquiries concerning comments, under Section 2.205(b)(4);
  (4) Notices of denial of confidential treatment and proposed disclosure of information, under Section 2.205(f);
  (5) Notices concerning shortened comment and/or waiting periods under Section 2.205(g);
  (6) Notices concerning modifications or overrulings of prior determinations, under Section 2.205(h);
  (7) Notices to affected businesses under Sections 2.301(g) and 2.301(h) and analogous provisions in Sections 2.302, 2.303, 2.304, 2.305, 2.306, 2.307, and 2.308; and

(8) Notices to affected businesses under Section 2.209.

(c) The Freedom of Information Officer shall, as quickly as possible, notify all EPA offices that may possess information submitted by the business to EPA, the Regional Freedom of Information Offices, the Office of General Counsel, and the offices of Regional Counsel of any designation received under this section. Businesses making designations under this section should bear in mind that several working days may be required for dissemination of this information within EPA and that some EPA offices may not receive notice of such designations.

2.214 Defense of Freedom of Information Act suites; participation by affected business.

(a) In making final confidentiality determinations under this subpart, the EPA legal office relies to a large extent upon the information furnished by the affected business to substantiate its claim of confidentiality. The EPA legal office may be unable to verify the accuracy of much of the information submitted by the affected business.

(b) If the EPA legal office makes a final confidentiality determination under this subpart that certain business information is entitled to confidential treatment, and EPA is sued by a requester under the Freedom of Information Act for disclosure of that information, EPA will:
   (1) Notify each affected business of the suit within 10 days after service of the complaint upon EPA;
   (2) Where necessary to preparation of EPA's defense, call upon each affected business to furnish assistance; and
   (3) Not oppose a motion by any affected business to intervene as a party to the suit under rule 24(b) of the Federal Rules of Civil Procedure.

(c) EPA will defend its final confidentiality determination, but EPA expects the affected business to cooperate to the fullest extent possible in this defense.

2.215 Confidentiality agreements.

(a) No EPA officer, employee, contractor, or subcontractor shall enter into any agreement with any affected business to keep business information confidential unless such agreement is consistent with this subpart. No EPA officer, employee, contractor, or subcontractor shall promise any affected business that business information will be kept confidential unless the promise is consistent with this subpart.

(b) If an EPA office has requested information from a State, local, or Federal agency and the agency refuses to furnish the information to EPA because the information is or may constitute confidential business information, the EPA office may enter into an agreement with the agency to keep the information confidential, notwithstanding the provisions of this subpart. However, no such agreement shall be made unless the General Counsel determines that the agreement is necessary and proper.

(c) To determine that an agreement proposed under paragraph (b) of this section is necessary, the General Counsel must find:
   (1) The EPA office requesting the information needs the information to perform it functions;
   (2) The agency will not furnish the information to EPA without an agreement by EPA to keep the information confidential; and
   (3) Either:
      (i) EPA has no statutory power to compel submission of the information directly from the affected business, or
      (ii) While EPA has statutory power to compel submission of the information directly from the affected business, compelling submission of the information directly from the business would:
         (A) Require time in excess of that available to the EPA office to perform its necessary work with the information;
         (B) Duplicate information already collected by the other agency and overly burden the affected business; or
         (C) Overly burden the resources of EPA.

(d) To determine that an agreement proposed under paragraph (b) of this section is proper, the General Counsel must find that the agreement states:
   (1) The purpose for which the information is required by EPA;
   (2) The conditions under which the agency will furnish the information to EPA;
   (3) The information subject to the agreement;
   (4) That the agreement does not cover information acquired by EPA from another source;
   (5) The manner in which EPA will treat the information; and

(6) That EPA will treat the information in accordance with the agreement subject to an order of a Federal court to disclose the information.

(e) EPA will treat any information acquired pursuant to an agreement under paragraph (b) of this section in accordance with the procedures of this subpart except where the agreement specifies otherwise.

§2.216 -.2.300 [Reserved]

§2.301, 2.302, 2.303, 2.304 See 15A NCAC 13A Part 2, Rule .0104(b)

2.305 Special rules governing certain information obtained under the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976.

(a) Definitions. For purposes of this section:
(1) "Act" means the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901 et seq.
(2) "Person" has the meaning given it in Section 1004(15) of the Act, 42 U.S.C. 6903(15).
(3) "Hazardous waste" has the meaning given it in Section 1004(5) of the Act, 42 U.S.C. 6903(5).
(4) "Proceeding" means any rulemaking, adjudication, or licensing conducted by EPA under the Act or under regulations which implement the Act, except for determinations under this part.

(b) Applicability. This section applies only to information provided to or obtained by EPA under Section 3007 of the Act, 42 U.S.C. 6927, by or from any person who generates, stores, treats, transports, disposes of, or otherwise handles hazardous wastes. Information will be considered to have been provided or obtained under Section 3007 of the Act if it was provided in response to a request from EPA made for any of the purposes stated in section 3007, or if its submission could have been required under Section 3007, regardless of whether Section 3007 was cited as the authority for any request for the information or whether the information was provided directly to EPA or through some third person.

(c) Basic rules which apply without change. Sections 2.201 through 2.207 and 2.209 through 2.215 apply without change in information to which this section applies.

(d) [Reserved]

(e) Substantive criteria for use in confidentiality determinations, Section 2.208 applies without change to information to which this section applies; however, no information to which this section applies is voluntarily submitted information.

(f) [Reserved]

(g) Disclosure of information relevant in a proceeding.
(1) Under Section 3007(b) of the Act (42 U.S.C. 6927(b)), any information to which this section applies may be disclosed by EPA because of the relevance of the information in a proceeding under the Act, notwithstanding the fact that the information otherwise might be entitled to confidential treatment under this subpart. Disclosure of information to which this section applies because of its relevance in a proceeding shall be made only in accordance with this paragraph (g).
(2)-(4) the provisions of section 2.301(g) (2), (3), and (4) are incorporated by reference as paragraphs (g) (2), (3), and (4), respectively, of this section.

(h) Disclosure to authorized representatives.
(1) Under Section 3007(b) of the Act (42 U.S.C. 6927(b)), EPA possesses authority to disclose to any authorized representative of the United States any information to which this section applies, notwithstanding the fact that the information might otherwise be entitled to confidential treatment under this subpart. Such authority may be exercised only in accordance with paragraph (h)(2) or (h)(3) of this section. (2)-(3) the provisions of Section 2.301(h) (2), and (3) are incorporated by reference as paragraph (h) (2) and (3), respectively, of this section.

§2.306, 2.307, 2.308, 2.309 See 15A NCAC 13A Part 2, Rule .0104(b)

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. January 1, 1986.
Amended Eff. June 1, 1988;
Transferred and Recodified from 10 NCAC 10F .0040 Eff. April 4, 1990;
Amended Eff. April 1, 1993; October 1, 1990; August 1, 1990
Recodified from 15A NCAC 13A .0004 Eff. December 20, 1996.

.0105 GENERAL PROGRAM REQUIREMENTS -- PART 124

40 CFR 124.1 through 124.21 (Subpart A), "General Program Requirements", have been incorporated by reference including subsequent amendments and editions, except that 40 CFR 124.2(c) is not incorporated by reference:

SUBPART A - GENERAL PROGRAM REQUIREMENTS

124.1 Purpose and scope.

(a) This Part contains EPA procedures for issuing, modifying, revoking and reissuing, or terminating all RCRA, UIC, PSD and NPDES "permits" other than RCRA and UIC "emergency permits" (see Sections 270.61 and 144.34) and 122.40) and RCRA "permits by rule" (Section 270.60). The latter kinds of permits are governed by Part 270. RCRA interim status and UIC authorization by rule are not "permits" and are covered by specific provisions in Parts 144, Subpart C, and 270. This part also does not apply to permits issued, modified, revoked and reissued or terminated by the Corps of Engineers. Those procedures are specified in 33 CFR Parts 320-327. The procedures of this part also apply to denial of a permit for the active life of a RCRA hazardous waste management facility or unit under Section 270.29.

(b) Part 124 is organized into six subparts. Subpart A contains general procedural requirements applicable to all permit programs covered by these regulations. Subparts B through F supplement these general provisions with requirements that apply to only one or more of the programs. Subpart A describes the steps EPA will follow in receiving permit applications, preparing draft permits, issuing public notice, inviting public comment and holding public hearings on draft permits. Subpart A also covers assembling an administrative record, responding to comments, issuing a final permit decision and allowing for administrative appeal of the final permit decision. Subpart B is reserved for specific procedural requirements for RCRA permits. There are none of these at present but they may be added in the future. Subpart C contains definitions and specific procedural requirements for PSD permits. Subpart D applies to NPDES permits until an evidentiary hearing begins, when Subpart E procedures take over for EPA-issued NPDES permits and EPA-terminated RCRA permits. Subpart F, which is based on the "initial licensing" provisions of the Administrative Procedure Act (APA) can be used instead of Subparts A through E in appropriate cases.

(c) Part 124 offers an opportunity for three kinds of hearings: a public hearing under Subpart A, an evidentiary hearing under Subpart E, and a panel hearing under Subpart F. This chart describes when these hearings are available for each of the five permit programs.

HEARINGS AVAILABLE UNDER THIS PART

	Subpart A		
Programs	(A)	(E)	(F)
	Public Hearing	Evidentiary Hearing	Panel Hearing
RCRA.....	On draft permit, at Director's discretion or on request (Section 124.12).	(1) Permit Termination (RCRA Section 3008). (2) With NPDES evidentiary hearing Section 124.74(b)(2).	(1) At RA's discretion in lieu of public hearing (Sections 124.12 (2) When consolidated with NPDES draft permit processed under Subpart F Section 124.111(a)(1)(i).
UIC.....	On draft permit, at Director's discretion or on request (Section 124.12).	With NPDES evidentiary hearing (Section 124.74(b)(2).	(1) At RA's discretion in lieu of public hearing (Sections 124.12 and 123.11(a)(3)). (2) When consolidated with NPDES draft permit processed under Subpart F (Section 124.111(a)(1)(i)).
PSD.....	On draft permit, at Director's discretion or on request (Section 124.12).	Not available [Section 124.71(c).]	When consolidated with NPDES draft permit processed under Subpart F if RA determines that CAA one year deadline will not be violated.
NPDES (other than general permit)	On draft permit, at Director's discretion or on request (Section 124.12).	(1) On request to challenge any permit condition or variance Section 124.74).	(1) At RA's discretion when first decision on permit or variance request (Section 123.111).

HEARINGS AVAILABLE UNDER THIS PART (Cont'd.)

Subpart A

Programs	(A) Public Hearing	(E) Evidentiary hearing	(F) Panel hearing
		(2) At RA's discretion or any 301(h) request (Section 124.64(b).	(2) At RA's discretion when request for evidentiary hearing is granted under Section 124.74(c)(B) and 124.111(a)(2).
NPDES (general permit 404.....	On draft permit, at Director's discretion or any request (Section 124.12). On draft permit or on application when no draft permit, at Director's discretion or on request (Section 124.12).	Not available (Section 124.71(a)..... Not available (Section 124.71).....	(3) At RA's discretion for any 301(h) request (Section 124.111(a)(3)). At RA's discretion in lieu public hearing (Section 124.111(a)(3). Not available (Section 124.111).

(d) This part is designed to allow permits for a given facility under two or more of the listed programs to be processed separately or together at the choice of the Regional Administrator. This allows EPA to combine the processing of permits only when appropriate, and not necessarily in all cases. The Regional Administrator may consolidate permit processing when the permit applications are submitted, when draft permits are prepared, or when final permit decisions are issued. This part also allows consolidated permits to be subject to a single public hearing under Section 124.12, a single evidentiary hearing under Section 124.75, or a single non-adversary panel hearing under Section 124.120. Permit applicants may recommend whether or not their applications should be consolidated in any given case.

(e) Certain procedural requirements set forth in Part 124 must be adopted by States in order to gain EPA approval to operate RCRA, UIC, NPDES, and 404 permit programs. These requirements are listed in Sections 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA) and signaled by the following words at the end of the appropriate Part 124 section or paragraph heading: (applicable to State programs, see Sections 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA)). Part 124 does not apply to PDS permits issued by an approved State.

(f) To coordinate decision-making when different permits will be issued by EPA and approved State programs, this part allows applications to be jointly processed, joint comment periods and hearings to be held, and final permits to be issued on a cooperative basis whenever EPA and a State agree to take such steps in general or in individual cases. These joint processing agreements may be provided in the Memorandum of Agreement developed under Section 123.25 (NPDES), 145.24 (UIC), 233.24 (404), and 271.8 (RCRA)).

124.2 Definitions.

(a) [Note: The definitions in Part 122 apply to this part except for PSD permits which are governed by the definitions in Section 124.41. Addition definitions can be found under Rule .0102.]

Administrator means the Administrator of the U.S. Environmental Protection Agency, or an authorized representative.

Applicable standards and limitations means all State, interstate, and federal standards and limitations to which a "discharge," a "sludge use or disposal practice" or a related activity is subject under the CWA, including "standards for sewage sludge use or disposal," "effluent limitations," water quality standards, standards of performance, toxic effluent standards or prohibitions, "best management practices," and pretreatment standards under sections 301, 302, 303, 304, 306, 307, 308, 403, and 405 of CWA.

Application means the EPA standard national forms for applying for a permit, including any additions, revisions or modifications to the forms; or forms approved by EPA for use in "approved States," including any approved modifications or revisions. For RCRA, application also includes the information required by the Director under Sections 270.14 through 270.29 (contents of Part B of the RCRA application).

Appropriate Act and regulations means the Clean Water Act (CWA); the Solid Waste Disposal Act, as amended by the Resource Conservation Recovery Act (RCRA); or Safe Drinking Water Act (SDWA), whichever is applicable; and applicable regulations promulgated under those statutes. In the case of an "approved State program" appropriate Act and regulations includes program requirements.

Consultation with the Regional Administrator (Section 124.62(a)(2)) means review by the Regional Administrator following evaluation by a panel of the technical merits of all 301(k) applications approved by the Director. The panel (to be appointed by the Director of the Office of Water Enforcement and Permits) will consist of Headquarters, Regional, and State personnel familiar with the industrial category in question.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act of Federal Pollution Control Act Amendments of 1972) Pub. L. 92-500, as amended by Pub L. 95-217 and Pub. L. 95-576; 33 U.W.C. 1251 et seq.

Director means the Regional Administrator, the State director or the Tribal director as the context requires, or an authorized representative. When there is no approved State or Tribal program, and there is an EPA administered program, "Director" means the Regional Administrator. When there is an approved State or Tribal program, "Director" normally means the State or Tribal director. In some circumstances, however, EPA retains the authority to take certain actions even when there is an approved State or Tribal program. (For example, when EPA has issued an NPDES permit prior to the approval of the State program, EPA may retain jurisdiction over that permit after program approval; see Section 123.1) In such cases, the term "Director" means the Regional Administrator and not the State or Tribal director.

Draft permit means a document prepared under Section 124.6 indicating the Director's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a "permit." A notice of intent to terminate a permit and a notice of intent to deny a permit as discussed in Section 124.5, are types of "draft permits." A denial of a request for modification, revocation and reissuance or termination, as discussed in Section 124.5, is not a "draft permit." A "proposal permit" is not a "draft permit."

EPA ("EPA") means the United States "Environmental Protection Agency."

Facility or activity means any "HWM facility," UIC "injection well," NPDES "point source" or "treatment works treating domestic sewage" or State 404 dredge or fill activity, or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the RCRA, UIC, NPDES, or 404 programs.

General permit (NPDES and 404) means an NPDES or 404 "permit" authorizing a category of discharges or activities under the CWA within a geographical area. For NPDES, a general permit means a permit issued under Section 122.28. For 404, a general permit means a permit issued under Section 233.37.

Indian Tribe means (except in the case of RCRA) any Indian Tribe having a Federally recognized governing body carrying out substantial governmental duties and powers over a defined area.

Interstate agency means an agency of two or more States established by or under an agreement or compact approved by the Congress, or any other agency of two or more States having substantial powers or duties pertaining to the control of pollution as determined and approved by the Administrator under the "appropriate Act and regulations."

Major facility means any RCRA, UIC, NPDES, or 404 "facility or activity" classified as such by the Regional Administrator, or, in the case of "approved State programs," the Regional Administrator in conjunction with the State Director.

NPDES means National Pollutant Discharge Elimination System.

Owner or operator means owner or operator of any "facility or activity" subject to regulation under the RCRA, UIC, NPDES, or 404 programs.

Permit means an authorization, license, or equivalent control document issued by EPA or an "approved State" to implement the requirements of this part and Parts 122, 123, 144, 145, 233, 270, and 271. "Permit" includes RCRA "permit by rule" (Section 270.60), UIC area permit (Section 144.33), NPDES or 404 "general permit" (Sections 270.61, 144.34, and 233.38). Permit does not include RCRA interim status (Section 270.70), UIC authorization by rule (Section 144.21), or any permit which has not yet been the subject of final agency action, such as a "draft permit" or a proposed permit."

Person means an individual, association, partnership, corporation, municipality, State, Federal, or Tribal agency, or an agency or employee thereof.

RCRA means the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 (Pub. L. 94-580, as amended by Pub. L. 95-609, 42 U.S.C. 6901 et seq).

Regional Administrator means the Regional Administrator of the appropriate Regional Office of the Environmental Protection Agency or the authorized representative of the Regional Administrator.

Schedule of compliance means a schedule of remedial measures included in a "permit," including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the "appropriate Act and regulations."

SDWA means the Safe Drinking Water Act (Pub. L. 95-523, as amended by Pub. L. 95-1900; 42 U.S.C. 300f et seq).

Section 404 program or State 404 program or 404 means an "approved State program" to regulate the "discharge of dredged material" and the "discharge of fill material" under section 404 of the Clean Water Act in "State regulated waters."

Site means the land or water area where any "facility or activity" is physically located or conducted, including adjacent land used in connection with the facility or activity.

State means one of the States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Trust Territory of the Pacific Islands (except in the case of RCRA), the Commonwealth of the Northern Mariana Islands, or an Indian Tribe treated as a State (except in the case of RCRA).

State Director means the chief administrative officer of any State, interstate, or Tribal agency operating an approved program, or the delegated representative of the State director. If the responsibility is divided among two or more States, interstate, or Tribal agencies, "State Director" means the chief administrative officer of the State, Interstate, or Tribal agency authorized to perform the particular procedure or function to which reference is made.

State Director means the chief administrative officer of any State or interstate agency operating an "approved program," or the delegated representative of the state Director. If responsibility is divided among two or more State or interstate agencies, "State Director" means the chief administrative officer of the State or interstate agency authorized to perform the particular procedure or function to which reference is made.

UIC means the Underground Injection Control program under Part C of the Safe Drinking Water Act, including an "approved program."

Variance (NPDES) means any mechanism or provision under section 301 of 316 of CWA or under 40 CFR Part 125, or in the applicable "effluent limitations guidelines" which allows modification to or waiver of the generally applicable effluent limitation requirements or time deadlines of CWA. This includes provisions which allow the establishment of alternative limitations based on fundamentally different factors or on sections 301(c), 301(g), 301(h), 301(i), or 316(a) of CWA.

(b) For the purposes of Part 124, the term "Director" means the State Director or Regional Administrator and is used when the accompanying provision is required of EPA-administered programs and of State programs under Sections 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA). The term "Regional Administrator" is used when the accompanying provision applies exclusively to EPA-issued permits and is not applicable to State programs under these sections. While States are not required to implement these latter provisions, they are not precluded from doing so, notwithstanding use of the term "Regional Administrator."

(c) **See 15A NCAC 13A .0105 GENERAL PROGRAM REQUIREMENTS - PART 124 (Introductory Paragraph indicates 40 CFR 124.2(c) is not incorporated by reference).**

124.3 Application for a permit.

(a) (Applicable to State programs, see Sections 123.25 (NPDES, 145.11 (UIC), 233.26 (404), and 271.14 (RCRA)).

(1) Any person who requires a permit under the RCRA, UIC, NPDES, or PDS programs shall complete, sign, and submit to the Director an application for each permit required under Sections 270.1 (RCRA), 144.1 (UIC), 40 CFR 52.21 (PSD), and 122.1 (NPDES). Applications are not required for RCRA permits by rule (Section 270.60), underground injections authorized by rules (Sections 144.21-144.26), NPDES general permits (Section 122.38) and 404 general permits (Section 122.18).

(2) The Director shall not begin the processing of a permit until the applicant has fully complied with the application requirements for that permit. See Sections 270.10, 270.13 (RCRA), 144.31 (UIC), 40 CFR 52.21 (PSD), and 122.21 (NPDES).

(3) Permit applications (except for PSD permits) must comply with the signature and certification requirements of Sections 122.22 (NPDES), 144.32 (UIC), 233.6 (404), and 270.11 (RCRA).

(b) [Reserved].

(c) The Regional Administrator shall review for completeness every application for an EPA-issued permit. Each application for an EPA-issued permit submitted by a new HWM facility, a new UIC injection well, a major PSD stationary source or major PSD modification, or an NPDES new source or NPDES new discharger should be reviewed for completeness by the Regional Administrator within 30 days of its receipt. Each application for an EPA-issued permit submitted by an existing HWM facility (both Parts A and B of the application), existing injection well or existing NPDES source should be reviewed for completeness within 60 days of receipt. Upon completing the review, the Regional Administrator shall notify the applicant in writing whether the application is complete. If the application is incomplete, the Regional Administrator shall list the information necessary to make the application complete. When the application is for an existing HWM facility, an existing UIC injection well or an

existing NPDES source, the Regional Administrator shall specify in the notice of deficiency a date for submitting the necessary information. The Regional Administrator shall notify the applicant that the application is complete

upon receiving this information. After the application is completed, the Regional Administrator may request additional information from an applicant but only when necessary to clarify, modify, or supplement previously submitted material. Requests for such additional information will not render an application incomplete.

(d) If an applicant fails or refuses to correct deficiencies in the application, the permit may be denied and appropriate enforcement actions may be taken under the applicable statutory provision including RCRA Section 3008, SDWA Sections 1423 and 1424, CAA Section 167, and CWA Sections 308, 309, 402(h), and 402(k).

(e) If the Regional Administrator decides that a site visit is necessary for any reason in conjunction with the processing of an application, he or she shall notify the applicant and a date shall be scheduled.

(f) The effective date of an application is the date on which the Regional Administrator notifies the applicant that the application is complete as provided in paragraph (c) of this section.

(g) For each application from a major new HWM facility, major new UIC injection well, major NPDES new source, or NPDES new discharger or a permit to be issued under provisions of 122.28(c), the Regional Administrator shall, no later than the effective date of the application, prepare and mail to the applicant a project decision schedule. (This paragraph does not apply to PSD permits.) The schedule shall specify target dates by which the Regional Administrator intends to:

(1) Prepare a draft permit;
(2) Give public notice;
(3) Complete the public comment period, including any public hearing;
(4) Issue a final permit; and
(5) In the case of an NPDES permit, complete any formal proceedings under Subparts E or F.

124.4 Consolidation of permit processing.

(a) (1) Whenever a facility or activity requires a permit under more than one statute covered by these regulations, processing of two or more applications for those permits may be consolidated. The first step in consolidation is to prepare each draft permit at the same time.

(2) Whenever draft permits are prepared at the same time, the statements of basis (required under Section 124.7 for EPA-issued permits only) or fact sheets (Section 124.8), administrative records (required under Section 124.9 for EPA-issued permits only), public comment periods (Section 124.10), and any public hearings (Section 124.12) on those permits should also be consolidated. The final permits may be issued together. They need not be issued together if in the judgement of the Regional Administrator or State Director(s), joint processing would result in unreasonable delay in the issuance of one or more permits.

(b) Whenever an existing facility or activity requires additional permits under on or more of the statutes covered by these regulations, the permitting authority may coordinate the expiration date(s) of the new permit(s) with the expiration date(s) of the existing permit(s) so that all permits expire simultaneously. Processing of the subsequent applications for renewal permits may then be consolidated.

(c) Processing of permit applications under paragraph (a) or (b) of this section may be consolidated as follows:

(1) The Director may consolidate permit processing at his or her discretion whenever a facility or activity requires all permits either from EPA or from an approved State.

(2) The Regional Administrator and the State Director(s) may agree to consolidate draft permits whenever a facility or activity requires permits from both EPA and an approved State.

(3) Permit applicants may recommend whether or not the processing of their applications should be consolidated.

(d) Whenever permit processing is consolidated and the Regional Administrator invokes the "initial licensing" provisions of Subpart F for an NPDES, RCRA, or UIC permit, any permit(s) with which that NPDES, RCRA or UIC permit was consolidated shall likewise be processed under Subpart F.

(e) Except with the written consent of the permit applicant, the Regional Administrator shall not consolidate processing a PSD permit with any other permit under paragraph (a) or (b) of this section or process a PSD permit under Subpart F as provided in paragraph (d) of this section when to do so would delay issuance of the PSD permit more than one year from the effective date of the application under Section 124.3(f).

124.5 Modification, revocation and reissuance, or termination of permits.

(a) (Applicable to State programs, see Section 123.7) Permits (other than PSD permits) may be modified,revoked, and reissued, or terminated either at the request of any interested person (including the permittee) or upon the Director's initiative. However, permits may only be modified, revoked and reissued, or terminated for the reasons

specified in Section 122.62 or 122.64 (NPDES), 144.39 or 144.40 (UIC), 233.14 or 233.15 (404), and 270.41 or 270.43 (RCRA). All requests shall be in writing and shall contain facts or reasons supporting the request.

(b) If the Director decides the request is not justified, he or she shall send the requester a brief written response giving a reason for the decision. Denials of requests for modification, revocation and reissuance, or termination are not subject to public notice, comment, or hearings. Denials by the Regional Administrator may be informally appealed to the Administrator by a letter briefly setting forth the relevant facts. The Administrator may direct the Regional Administrator to begin modification, revocation and reissuance, or termination proceedings under paragraph (c) of this section. The appeal shall be considered denied if the Administrator takes no action on the letter within 60 days after receiving it. This informal appeal is, under 5 U.S.C. Section 704, a prerequisite to seeking judicial review of EPA action in denying a request for modification, revocation and reissuance, or termination.

(c) (Applicable to State programs, see Sections 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA).

(1) If the Director tentatively decides to modify or revoke and reissue a permit under Sections 122.62 (NPDES), 144.39 (UIC), 233.14 (404), or 270.41 or 270.42(c) (RCRA), he or she shall prepare a draft permit under Section 124.6 incorporating the proposed changes. The Director may request additional information and, in the case of a modified permit, may require the submission of an updated permit application. In the case of revoked and reissued permits, the Director shall require the submission of a new application.

(2) In a permit modification under this section, only those conditions to be modified shall be reopened when a new draft permit is prepared. All other aspects of the existing permit shall remain in effect for the duration of the unmodified permit. When a permit is revoked and reissued under this section, the entire permit is reopened just as if the permit had expired and was being reissued. During any revocation and reissuance proceeding the permittee shall comply with all conditions of the existing permit until a new final permit is reissued.

(3) "Minor modifications" as defined in Sections 122.63 (NPDES), 144.41 (UIC), and 233.16 (404), and "Classes 1 and 2 modifications" as defined in Section 270.42(a) and (b) (RCRA) are not subject to the requirements of this section.

(d) (Applicable to State programs, see Sections 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA)). If the Director tentatively decides to terminate a permit under Sections 122.64 (NPDES), 144.40 (UIC), 233.15 (404), or 270.43 (RCRA), he or she shall issue a notice of intent to terminate. A notice of intent to terminate is a type of draft permit which follows the same procedures as any draft permit prepared under Section 124.6. In the case of EPA-issued permits, a notice of intent to terminate shall not be issued if the Regional Administrator and the permittee agree to termination in the course of transferring permit responsibility to an approved State under Section 123.24(b)(1) (NPDES), 145.24(b)(1) (UIC), or 271.8(b)(6) (RCRA).

(e) When EPA is the permitting authority, all draft permits (including notices of intent to terminate) prepared under this section shall be based on the administrative record as defined in Section 124.9.

(f) (Applicable to State programs, see Section 233.26 (404)). Any request by the permittee for modification to an existing 404 permit (other than a request for a minor modification as defined in Section 233.16 (404)) shall be treated as a permit application and shall be processed in accordance with all requirements of Section 124.3.

(g) (1) [Reserved for PSD Modification Provisions]

(2) PSD permits may be terminated only by rescission under Section 52.21(w) or by automatic expiration under Section 52.21(s). Applications for rescission shall be processed under Section 52.21(w) and are not subject to this Part.

124.6 Draft Permits.

(a) (Applicable to State programs, see Sections 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA). Once an application is complete, the Director shall tentatively decide whether to prepare a draft permit (except in the case of State Section 404 permits for which no draft permit is required under Section 233.39) or to deny the application.

(b) If the Director tentatively decides to deny the permit application, he or she shall issue a notice of intent to deny. A notice of intent to deny the permit application is a type of draft permit which follows the same procedures as any draft permit prepared under this section. See Section 124.6(e). If the Director's final decision (Section 124.15) is that the tentative decision to deny the permit application was incorrect, he or she shall withdraw the notice of intent to deny and proceed to prepare a draft permit under paragraph (d) of this section.

(c) (Applicable to State programs, see Sections 123.25, (NPDES) and 233.26 (404).) If the Director tentatively decides to issue an NPDES or 404 general permit, he or she shall prepare a draft general permit under paragraph (d) of this section.

(d) (Applicable to State programs, see Sections 123.25 (NPDES) 145.11 (UIC), 233.26 (404), and 271.14 (RCRA).) If the Director decides to prepare a draft permit, he or she shall prepare a draft permit that contains the following information:
  (1) All conditions under Sections 122.41 and 122.43 (NPDES), 144.51 and 144.42 (UIC), 233.7 and 233.8 (404), or 270.30 and 270.32 (RCRA) (except for PSD permits);
  (2) All compliance schedules under Sections 122.47 (NPDES), 144.53 (UIC), 233.10 (404), or 270.33 (RCRA) (except for PSD permits);
  (3) All monitoring requirements under Sections 122.48 (NPDES), 144.54 (UIC), 233.11 (404), or 270.31 (RCRA) (except from PSD permits); and
  (4) For:
    (i) RCRA permits, standards for treatment, storage, and/or disposal and other permit conditions under Section 270.30;
    (ii) UIC permits, permit conditions under Section 144.52;
    (iii) PSD permits, permit conditions under 40 CFR Section 52.21;
    (iv) 404 permits, permit conditions under Sections 233.7 and 233.8;
    (v) NPDES permits, effluent limitations, standards, prohibitions and conditions under Sections 122.41 and 122.42, including when applicable any conditions certified by a State agency under Section 124.55, and all variances that are to be included under Section 124.63.

(e) (Applicable to State programs, see Section 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA).) All draft permits prepared by EPA under this section shall be accompanied by a statement of basis (Section 124.7) or fact sheet (Section 124.8), and shall be based on the administrative record (Section 124.9), publicly noticed (Section 124.10) and made available for public comment (Section 124.11). The Regional Administrator shall give notice of opportunity for a public hearing (Section 124.12), issue a final decision (Section 124.15) and respond to comments (Section 124.17). For RCRA, UIC or PSD permits, an appeal may be taken under Section 124.19 and, for NPDES permits, an appeal may be taken under Section 124.74. Draft permits prepared by a State shall be accompanied by a fact sheet if required under Section 124.8.

124.7 Statement of Basis.

EPA shall prepare a statement of basis for every draft permit for which a fact sheet under Section 124.8 is not prepared. The statement of basis shall briefly describe the derivation of the conditions of the draft permit and the reasons for them or, in the case of notices of intent to deny or terminate, reasons supporting the tentative decision. The statement of basis shall be sent to the applicant and, on request, to any other person.

124.8 Fact Sheet.

(Applicable to State programs, see Sections 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA).)

(a) A fact sheet shall be prepared for every draft permit for a major HWM, UIC, 404, or NPDES facility or activity, for every 404 and NPDES general permit (Sections 233.37 and 122.28), for every NPDES draft permit that incorporates a variance or requires an explanation under Section 124.56(b), and for every draft permit which the Director finds is the subject of widespread public interest or raises major issues. The fact sheet shall briefly set forth the principal facts and the significant factual, legal, methodological and policy questions considered in preparing the draft permit. The Director shall send this fact sheet to the applicant and, on request, to any other person.

(b) The fact sheet shall include, when applicable:
  (1) A brief description of the type of facility or activity which is the subject of the draft permit;
  (2) The type and quantity of wastes, fluids, or pollutants which are proposed to be or are being treated, stored, disposed of, injected, emitted, or discharged.
  (3) For a PSD permit, the degree of increment consumption expected to result from operation of the facility or activity.
  (4) A brief summary of the basis for the draft permit conditions including references to applicable statutory or regulatory provisions and appropriate supporting references to the administrative record required by Section 124.9 (for EPA-issued permits);
  (5) Reasons why any requested variances or alternatives to required standards do or do not appear justified;
  (6) A description of the procedures for reaching a final decision on the draft permit including:
    (i) The beginning and ending dates of the comment period under Section 124.10 and the address where comments will be received;
    (ii) Procedures for requesting a hearing and the nature of that hearing; and

(iii) Any other procedures by which the public may participate in the final decision.

(7) Name and telephone number of a person to contact for additional information.

(8) For NPDES permits, provisions satisfying the requirements of Section 124.56.

124.9 Administrative Record for Draft Permits When EPA is the Permitting Authority.

(a) The provisions of a draft permit prepared by EPA under Section 124.6 shall be based on the administrative record defined in this section.

(b) For preparing a draft permit under Section 124.6, the record shall consist of:

(1) The application, if required, and any supporting data furnished by the applicant;

(2) The draft permit of notice of intent to deny the application or to terminate the permit;

(3) The statement of basis (Section 124.7) or fact sheet (Section 124.8);

(4) All documents cited in the statement of basis or fact sheet; and

(5) Other documents contained in the supporting file for the draft permit;

(6) For NPDES new source draft permits only, any environmental assessment, environmental impact statement (EIS), finding of no significant impact, or environmental information document and any supplement to an EIS that may have been prepared. NPDES permits other than permits to new sources as well as all RCRA, UIC and PSD permits are not subject to the environmental impact statement provisions of Section 102(2)(C) of the National Environmental Policy Act, 42 U.S.C. 4321.

(c) Material readily available at the issuing Regional Office or published material that is generally available and that is included in the administrative record under paragraphs (b) and (c) of this section need not be physically included with the rest of the record as long as it is specifically referred to in the statement of basis or the fact sheet.

(d) This section applies to all draft permits when public notice was given after the effective date of these regulations.

124.10 Public notice of permit actions and public comment period.

(a) **Scope.**

(1) The Director shall give public notice that the following actions have occurred:

(i) A permit application has been tentatively denied under Section 124.6(b);

(ii) (Applicable to State programs, see Section 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA)). A draft permit has been prepared under Section 124.6(d);

(iii) (Applicable to State programs, see Sections 123.25 (PDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA)). A hearing has been scheduled under Section 124.12, Subpart E or Subpart F;

(iv) An appeal has been granted under Section 124.19(c);

(v) (Applicable to State programs, see Section 233.26 (404)). A State Section 404 application has been received in cases when no draft permit will be prepared (see Section 233.39); or

(vi) An NPDES new source determination has been made under Section 122.29.

(2) No public notice is required when a request for permit modification, revocation and reissuance, or termination is denied under Section 124.5(b). Written notice of that denial shall be given to the requester and to the permittee.

(3) Public notices may describe more than one permit or permit action.

(b) **Timing (applicable to State programs, see Sections 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA)).**

(1) Public notice of the preparation of a draft permit (including a notice of intent to deny a permit application) required under paragraph (a) of this section shall allow at least 30 days for public comment. For RCRA permits only, public notice shall allow at least 45 days for public comment. For EPA-issued permits, if the Regional Administrator determines under 40 CFR Part 6, Subpart F that an Environmental Impact Statement (EIS) shall be prepared for an NPDES new source, public notice of the draft permit shall not be given until after a draft EIS is issued.

(2) Public notice of a public hearing shall be given at least 30 days before the hearing. (Public notice of the hearing may be given at the same time as public notice of the draft permit and the two notices may be combined.)

(c) **Methods** (applicable to State programs, see Sections 123.25) (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA)). Public notice of activities described in paragraph (a)(1) of this section shall be given by the following methods:

(1) By mailing a copy of a notice to the following persons (any person otherwise entitled to receive notice under this paragraph may waive his or her rights to receive notice for any classes and categories of permits);

(i) The applicant (except for NPDES and 404 general permits when there is no applicant);

(ii) Any other agency which the Director knows has issued or is required to issue an RCRA, UIC, PSD, NPDES or 404 permit for the same facility or activity (including EPA when the draft permit is prepared by the State);

(iii) Federal and State agencies with jurisdiction over fish, shellfish, and wildlife resources and over coastal zone management plans, the Advisory Council on Historic Preservation, State Historic Preservation Officers, and other appropriate government authorities, including any affected States;

(iv) For NPDES and 404 permits only, any State agency responsible for plan development under CWA section 208(b)(2), 208(b)(4) or 303(e) and the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service and the National Marine Fisheries Service;

(v) For NPDES permits only, any user identified in the permit application of a privately owned treatment works;

(vi) For 404 permits only, any reasonably ascertainable owner of property adjacent to the regulated facility or activity and the Regional Director of the Federal Aviation Administration if the discharge involves the construction of structures which may affect aircraft operations or for purposes associated with seaplane operations;

(vii) For PSD permits only, affected State and local air pollution control agencies, the chief executives of the city and county where the major stationary source or major modification would be located, any comprehensive regional land use planning agency and any State, Federal Land Manager, or Indian Governing Body whose lands may be affected by emissions from the regulated activity;

(viii) Persons on a mailing list developed by:

(A) Including those who request in writing to be on the list;

(B) Soliciting person for "area lists" from participants in past permit proceedings in that area; and

(C) Notifying the public of the opportunity to be put on the mailing list through periodic publication in the public press and such publications as Regional and State funded newsletters, environmental bulletins, or State law journals. (The Director may update the mailing list from time to time by requesting written indication of continued interest from those listed. The Director may delete from the list the name of any person who fails to respond to such a request.)

(ix) For RCRA Permits Only;

(A) To any unit of local government having jurisdiction over the area where the facility is proposed to be located; and

(B) To each State agency having any authority under State law with respect to the construction or operation of such facility.

(2) (i) For major permits and NPDES and 404 general permits, publication of a notice in a daily or weekly newspaper within the area affected by the facility or activity; and for EPA-issued NPDES general permits, in the FEDERAL REGISTER;

[Note: The Director is encouraged to provide as much notice as possible of the NPDES or Section 404 draft general permit to the facilities or activities to be covered by the general permit.]

(ii) For all RCRA permits, publication of a notice in a daily or weekly major local newspaper of general circulation and broadcast over local radio stations.

(3) When the program is being administered by an approved State, in a manner constituting legal notice to the public under State law; and

(4) Any other method reasonably calculated to give actual notice of the action in question to the persons potentially affected by it, including press releases or any other forum or medium to elicit public participation.

(d) **Contents (applicable to State programs, see Sections 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA))**

(1) All public notices. All public notices issued under this part shall contain the following minimum information:

(i) Name and address of the office processing the permit action for which notice is being given;

(ii) Name and address of the permittee or permit applicant and, if different, of the facility or activity regulated by the permit, except in the case of NPDES and 404 draft general permits under Sections 122.28 and 233.37;

(iii) A brief description of the business conducted at the facility or activity described in the permit application or the draft permit, for NPDES or 404 general permits when there is no application.

(iv) Name, address and telephone number of a person from whom interested persons may obtain further information, including copies of the draft permit or draft general permit, as the case may be, statement of basis or fact sheet, and the application; and

(v) A brief description of the comment procedures required by Sections 124.11 and 124.12 and the time and place of any hearing that will be held, including a statement of procedures to request a hearing (unless a hearing has already been scheduled) and other procedures by which the public may participate in the final permit decision.

(vi) For EPA-issued permits, the location of the administrative record required by Section 124.9, the times at which the record will be open for public inspection, and a statement that all data submitted by the applicant is available as part of the administrative record.

(vii) For NPDES permits only, a general description of the location of each existing or proposed discharge point and the name of the receiving water. For draft general permits, this requirement will be satisfied by a map or description of the permit area. For EPA-issued NPDES permits only, if the discharge is from a new source, a statement as to whether an environmental impact statement will be or has been prepared.

(viii) For 404 permit only:

(A) The purpose of the proposed activity (including, in the case of fill material, activities intended to be conducted on the fill), a description of the type, composition, and quantity of materials to be discharged and means of conveyance; and any proposed conditions and limitations on the discharge;

(B) The name and water quality standards classification, if applicable, of the receiving waters into which the discharge is proposed, and a general description of the site of each proposed discharge and the portions of the site and the discharges which are within State regulated waters;

(C) A description of the anticipated environmental effects of activities conducted under the permit;

(D) References to applicable statutory or regulatory authority; and

(E) Any other available information which may assist the public in evaluating the likely impact of the proposed activity upon the integrity of the receiving water.

(ix) Any additional information considered necessary or proper.

(2) Public notices for hearings. In addition to the general public notice described in paragraph (d) (1) of this section, the public notice of a hearing under Section 124.12, Subpart E, or Subpart F shall contain the following information:

(i) Reference to the date of previous public notices relating to the permit;

(ii) Date, time, and place of the hearing;

(iii) A brief description of the nature and purpose of the hearing, including the applicable rules and procedures; and

(iv) For 404 permits only, a summary of major issues raised to date during the public comment period.

(e) **(Applicable to State programs, see Sections 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA)).** In addition to the general public notice described in paragraph (d)(1) of this section, all persons identified in paragraphs (c)(1)(i), (ii), (iii), and (iv) of this section shall be mailed a copy of the fact sheet or statement of basis (for EPA-issued permits), the permit application (if any) and the draft permit (if any).

124.11 Public comments and requests for public hearings.

(Applicable to State programs, see Sections 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA).) During the public comment period provided under Section 124.10, any interested person may submit written comments on the draft permit or the permit application for 404 permits when no draft permit is required (see Section 233.39) and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments shall be considered in making the final decision and shall be answered as provided in Section 124.17.

124.12 Public hearings.

(a) **(Applicable to State programs, see Sections 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA).)**
  (1) The Director shall hold a public hearing whenever he or she finds, on the basis of requests, a significant degree of public interest in a draft permit(s);
  (2) The Director may also hold a public hearing at his or her discretion whenever, for instance, such a hearing might clarify one or more issues involved in the permit decision;
  (3) For RCRA permits only,
    (i) the Director shall hold a public hearing whenever he or she receives written notice of opposition to a draft permit and a request for a hearing within 45 days of public notice under Section 124.10(b)(1);
    (ii) whenever possible, the Director shall schedule a hearing under this section at a location convenient to the nearest population center to the proposed facility;
  (4) Public notice of the hearing shall be given as specified in Section 124.10.

(b) Whenever a public hearing will be held and EPA is the permitting authority, the Regional Administrator shall designate a Presiding Officer for the hearing who shall be responsible for its scheduling and orderly conduct.

(c) Any person may submit oral or written statements and data concerning the draft permit. Reasonable limits may be set upon the time allowed for oral statements, and the submission of statements in writing may be required. The public comment period under Section 124.10 shall automatically be extended to the close of any public hearing under this section. The hearing officer may also extend the comment period by so stating at the hearing.

(d) A tape recording or written transcript of the hearing shall be made available to the public.

(e) (1) At his or her discretion, the Regional Administrator may specify that RCRA or UIC permits be processed under the procedures in Subpart F.
  (2) For initial RCRA permits for existing HWM facilities, the Regional Administrator shall have the discretion to provide a hearing under the procedures in Subpart F. The permit applicant may request such a hearing pursuant to Section 124.114 on one or more issues, if the applicant explains in his request why he or she believes those issues:
    (i) Are genuine issues to material fact; and
    (ii) To determine the outcome of one or more contested permit conditions identified as such in the applicant's request, that would require extensive changes to the facility ("contested major permit conditions"). If the Regional Administrator decides to deny the request, he or she shall send to the applicant a brief written statement of his or her reasons for concluding that no such determinative issues have been presented for resolution in such a hearing.

124.13 Obligation to raise issues and provide information during the public comment period.

All persons, including applicants, who believe any condition of a draft permit is inappropriate or that the Director's tentative decision to deny an application, terminate a permit, or prepare a draft permit is inappropriate, must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by the close of the public comment period (including any public hearing) under Section 124.10. Any supporting materials which are submitted shall be included in full and may not be incorporated by reference, unless they are already part of the administrative record in the same proceeding, or consist of State or Federal statutes and regulations, EPA documents of general applicability, or other generally available reference materials. Commenters shall make supporting material not already included in the administrative record available to EPA as directed by the Regional Administrator. (A comment period longer than 30 days may be necessary to give commenters a reasonable opportunity to comply with the requirements of this section. Additional time shall be granted under section 124.10 to the extent that a commenter who requests additional time demonstrates the need for such time.)

124.14 Reopening of the public comment period.

(a) (1) The Regional Administrator may order the public comment period reopened if the procedures of this paragraph could expedite the decision-making process. When the public comment period is reopened under this paragraph, all persons, including applicants, who believe any condition of a draft permit is inappropriate or that the Regional Administrator's tentative decision to deny an application, terminate a permit, or prepare a draft permit is inappropriate, must submit all reasonably available factual grounds supporting their position, including all supporting material, by a date, not less than 60 days after public notice under paragraph (a)(2) of this section, set by the Regional Administrator. Thereafter, any person

may file a written response to the material filed by any other person, by a date, not less than 20 days after the date set for filing of the material, set by the Regional Administrator.

(2) Public notice of any comment period under this paragraph shall identify issues to which the requirements of Section 124.14(1) shall apply.

(3) On his own motion or on the request of any person, the Regional Administrator may direct that the requirements of paragraph (a)(1) of this section shall apply during the initial comment period where it reasonably appears that issuance of the permit will be contested and that applying the requirement of paragraph (a)(1) of this section will substantially expedite the decision-making process. The notice of the draft permit shall state whenever this has been done.

(4) A comment period of longer than 60 days will often be necessary in complicated proceedings to give commenters a reasonable opportunity to comply with the requirements of this section. Commenters may request longer comment periods and they shall be granted under Section 124.10 to the extent they appear necessary.

(b) If any data information or arguments submitted during the public comment period or argument required under Section 124.12, appear to raise substantial new questions concerning a permit, the Regional Administrator may take one or more of the following actions:

(1) Prepare a new draft permit, appropriately modified, under Section 124.6;

(2) Prepare a revised statement of basis under Section 124.7, a fact sheet or revised fact sheet under Section 124.8 and reopen the comment period under Section 124.14; or

(3) Reopen or extend the comment period under Section 124.10 to give interested persons an opportunity to comment on the information or arguments submitted.

(c) Comments filed during the reopened comment period shall be limited to the substantial new questions that caused its reopening. The public notice under Section 124.10 shall define the scope of the reopening.

(d) For RCRA, UIC, or NPDES permits, the Regional Administrator may also, in the circumstances described above, elect to hold further proceedings under Subpart F. This decision may be combined with any of the actions enumerated in paragraph (b) of this section.

(e) Public notice of any of the above actions shall be issued under Section 124.10.

124.15 Issuance and effective date of permit.

(a) After the close of the public comment period under Section 124.10 on a draft permit, the Regional Administrator shall issue a final permit decision (or a decision to deny a permit for the active life of a RCRA hazardous waste management facility or unit under Section 270.29). The Regional Administrator shall notify the applicant and each person who has submitted written comments or requested notice of the final permit decision. This notice shall include reference to the procedures for appealing a decision on an RCRA, UIC, or PSD permit or for contesting a decision on an NPDES permit or a decision to terminate an RCRA permit. For the purposes of this section, a final permit decision means a final decision to issue, deny, modify, revoke and reissue, or terminate a permit.

(b) A final permit decision (or a decision to deny a permit for the active life of a RCRA hazardous waste management facility or unit under Section 270.29) shall become effective 30 days after the service of notice of the decision unless:

(1) A later effective date is specified in the decision; or

(2) Review is requested under section 124.19 (RCRA, UIC, and PSD permits) or an evidentiary hearing is requested under section 124.74 (NPDES permit and RCRA permit terminations); or

(3) No comments requested a change in the draft permit, in which case the permit shall become effective immediately upon issuance.

124.16 Stays of Contested permit conditions.

(a) **Stays.**

(1) If a request for review of an RCRA or UIC permit under Section 124.19 or an NPDES permit under Section 124.74 or Section 124.114 is granted or if conditions of an RCRA or UIC permit are consolidated for reconsideration in an evidentiary hearing on an NPDES permit under Sections 124.74, 124.82 or 124.114, the effect of the contested permit conditions shall be stayed and shall not be subject to judicial review pending final agency action. (No stay of a PSD permit is available under this section.) If the permit involves a new facility or new injection well, new source, new discharger or a recommencing

discharger, the applicant shall be without a permit for the proposed new facility, injection well, source or discharger pending final agency action. See also section 124.60.

(2) Uncontested conditions which are not severable from those contested shall be stayed together with the contested conditions. Stayed provisions of permits for existing facilities, injection wells, and sources shall be identified by the Regional Administrator. All other provisions of the permit for the existing facility, injection well or source shall remain fully effective and enforceable.

(b) **Stays based on cross effects.**

(1) A stay may be granted based on the grounds that an appeal to the Administrator under Section 124.19 of one permit may result in changes to another EPA-issued permit only when each of the permits involved has been appealed to the Administrator and he or she has accepted each appeal.

(2) No stay of an EPA-issued RCRA, UIC, or NPDES permit shall be granted based on the staying of any State-issued permit except at the discretion of the Regional Administrator and only upon written request from the State Director.

(c) Any facility or activity holding an existing permit must:

(1) Comply with the conditions of that permit during any modification or revocation and reissuance proceeding under Section 124.5; and

(2) To the extent conditions of any new permit are stayed under this section, comply with the conditions of the existing permit which correspond to the stayed conditions, unless compliance with the existing conditions would be technologically incompatible with compliance with other conditions of the new permit which have not been stayed.

124.17 Response to comments.

(a) (Applicable to State programs, see Section 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA).). At the time that any final permit decision is issued under Sections 124.15 , the Director shall issue a response to comments. States are only required to issue a response to comments when a final permit is issued. This response shall:

(1) Specify which provisions, if any, of the draft permit have been changed in the final permit decision, and the reasons for the change; and

(2) Briefly describe and respond to all significant comments on the draft permit or the permit application (for Section 404 permits only) raised during the public comment period, or during any hearing.

(b) For EPA-issued permits, any documents cited in the response to comments shall be included in the administrative record for the final permit decision as defined in Section 124.18. If new points are raised or new material supplied during the public comment period, EPA may document its response to those matters by adding new materials to the administrative record.

(c) (Applicable to State programs, see Sections 123.25 (NPDES), 145.11 (UIC), 233.26 (404), and 271.14 (RCRA).) The response to comments shall be available to the public.

124.18 Administrative Record for Final Permit When EPA is the Permitting Authority.

(a) The Regional Administrator shall base final permit decisions under Section 124.15 on the administrative record defined in this section.

(b) The administrative record for any final permit shall consist of the administrative record for the draft permit and:

(1) All comments received during the public comment period provided under Section 124.10 (including any extension or reopening under Section 124.14);

(2) The tape or transcript of any hearing(s) held under Section 124.12;

(3) Any written materials submitted at such a hearing;

(4) The response to comments required by Section 124.17 and any new material placed in the record under that section;

(5) For NPDES new source permits only, any final environmental impact statement and any supplement to the final EIS;

(6) Other documents contained in the supporting file for the permit; and

(7) The final permit.

(c) The Additional documents required under paragraph (b) of this section should be added to the record as soon as possible after their receipt or publication by the Agency. The record shall be complete on the date the final permit is issued.

(d) This section applies to all final RCRA, UIC, PSD, and NPDES permits when the draft permit was subject to the administrative record requirements of Section 124.9 and to all NPDES permits when the draft permit was included in a public notice after October 12, 1979.

(e) Material readily available at the issuing Regional Office, or published materials which are generally available and which are included in the administrative record under the standards of this section or of Section 124.17. ("Response to comment"), need not be physically included in the same file as the rest of the record as long as it is specifically referred to in the statement of basis or fact sheet or in the response to comments.

124.19 Appeal of RCRA, UIC and PSD Permits.

(a) Within 30 days after a RCRA, UIC or PSD final permit decision (or a decision under Section 270.29 to deny a permit for the active life of a RCRA hazardous waste management facility or unit) has been issued under Section 124.15, any person who filed comments on that draft permit or participated in the public hearing may petition the Administrator to review any condition of the permit decision. Any person who failed to file comments or failed to participate in the public hearing on the draft permit may petition for administrative review only to the extent of the changes from the draft to the final permit decision. The 30-day period within which a person may request review under this section begins with the service of notice of the Regional Administrator's action unless a later date is specified in that notice. The petition shall include a statement of the reasons supporting that review, including a demonstration that any issues being raised were raised during the public comment period (including any public hearing) to the extent required by these regulations and, when appropriate, a showing that the condition in question is based on:
  (1) A finding of fact or conclusion of law which is clearly erroneous, or
  (2) An exercise of discretion or an important policy consideration which the Administrator should, in his or her discretion, review.

(b) The Administrator may also decide on his or her initiative to review any condition of any RCRA, UIC or PSD permit issued under this part. The Administrator must act under this paragraph within 30 days of the service date of notice of the Regional Administrator's action.

(c) Within a reasonable time following the filing of the petition for review, the Administrator shall issue an order either granting or denying the petition for review. To the extent review is denied, the conditions of the final permit decision become final agency action. Public notice of any grant of review by the Administrator under paragraph (a) or (b) of this section shall be given as provided in Section 124.10. Public notice shall set forth a briefing schedule for the appeal and shall state that any interested person may file an amicus brief. Notice of denial of review shall be sent only to the person(s) requesting review.

(d) The Administrator may defer consideration of an appeal of a RCRA or UIC permit under this section until the completion of formal proceedings under Subpart E or F relating to an NPDES permit issued to the same facility or activity upon concluding that:
  (1) The NPDES permit is likely to raise issues relevant to a decision of the RCRA or UIC appeals;
  (2) The NPDES permit is likely to be appealed; and
  (3) Either:
    (i) The interests of both the facility or activity and the public are not likely to be materially adversely affected by the deferral; or
    (ii) Any adverse effect is outweighed by the benefits likely to result from a consolidated decision on appeal.

(e) A petition to the Administrator under paragraph (a) of this section is, under 5 U.S.C. Section 704, a prerequisite to the seeking of judicial review of the final agency action.

(f) (1) For purposes of judicial review under the appropriate Act, final agency action occurs when a final RCRA, UIC or PSD permit is issued or denied by EPA and agency review procedures are exhausted. A final permit decision shall be issued by the Regional Administrator:
    (i) When the Administrator issues notice to the parties that review has been denied;
    (ii) When the Administrator issues a decision on the merits of the appeal and the decision does not include a remand of the proceedings; or
    (iii) Upon the completion of remand proceedings if the proceedings are remanded, unless the Administrator's remand order specifically provides that appeal of the remand decision will be required to exhaust administrative remedies.
  (2) Notice of any final agency action regarding a PSD permit shall promptly be published in the Federal Register.

124.20 Computation of time.

(a) Any time period scheduled to begin on the occurrence of an act or event shall begin on the day after the act or event.
(b) Any time period scheduled to begin before the occurrence of an act or event shall be computed so that the period ends on the day before the act or event.
(c) If the final day of any time period falls on a weekend or legal holiday, the time period shall be extended to the next working day.
(d) Whenever a party or interested person has the right or is required to act within a prescribed period after the service of notice or other paper upon him or her by mail, 3 days shall be added to the prescribed time.

124.21 Effective Date of Part 124.

(a) Except for paragraphs (b) and (c) of this section, Part 124 will become effective July 18, 1980. Because this effective date will precede the processing of any RCRA or UIC permits, Part 124 will apply in its entirety to all RCRA and UIC permits.
(b) All provisions of Part 124 pertaining to the RCRA program will become effective on November 19, 1980.
(c) All provisions of Part 124 pertaining to the UIC program will become effective July 18, 1980, but shall not be implemented until the effective date of 40 CFR Part 146.
(d) This part does not significantly change the way in which NPDES permits are processed. Since October 12, 1979, NPDES permits have been the subject to almost identical requirements in the revised NPDES regulations which were promulgated on June 1, 1979. See 44 FR 32948. To the extent this part changes the revised NPDES permit regulations, those changes will take effect as to all permit proceedings in progress on July 3, 1980.
(e) This part also does not significantly change the way in which PSD permits are processed. For the most part, these regulations will also apply to PSD proceedings in progress on July 18, 1980. However, because it would be disruptive to require retroactively a formal administrative record for PSD permits issued without one, Sections 124.9 and 124.18 will apply to PSD permits for which draft permits were prepared after the effective date of these regulations.

History Note: Statutory Authority G.S. 130A-294 (c); 150B-21.6;
Eff. November 19, 1980;
Amended Eff. February 1, 1988; October 1, 1986;
July 1, 1986; July 1, 1985; April 1, 1984; October 1, 1983;
September 15, 1981.
Transferred and Recodified from 10 NCAC 10F .0035 Eff. April 4, 1990;
Amended Eff. April 1, 1993; October 1, 1990; August 30, 1990;
Recodified from 15A NCAC 13A .0005 Eff. December 20, 1996.

.0106 IDENTIFICATION & LISTING OF HAZARDOUS WASTES - PART 261

(a) 40 CFR 261.1 through 261.9 (Subpart A), "General", are incorporated by reference including subsequent amendments and editions.

SUBPART A - GENERAL

261.1 Purpose and scope.

(a) This Part identifies those solid wastes which are subject to regulation as hazardous wastes under Parts 262 through 265, 268 and Parts 270, 271, and 124 of this chapter and which are subject to the notification requirements of Section 3010 of RCRA. In this Part:
  (1) Subpart A defines the terms "solid waste" and "hazardous waste," identifies those wastes which are excluded from regulation under Parts 262 through 266, 268 and 270, and establishes special management requirements for hazardous waste produced by conditionally exempt small quantity generators and hazardous waste which is recycled.
  (2) Subpart B sets forth the criteria used by EPA to identify characteristics of hazardous waste and to list particular hazardous wastes.
  (3) Subpart C identifies characteristics of hazardous wastes.
  (4) Subpart D lists particular hazardous wastes.

(b) (1) The definition of solid waste contained in this part applies only to wastes that also are hazardous for purposes of the regulations implementing Subtitle C of RCRA. For example, it does not apply to materials (such as nonhazardous scrap, paper, textiles, or rubber) that are not otherwise hazardous wastes and that are recycled.
  (2) This part identifies only some of the materials which are solid wastes and hazardous wastes under Sections 3007, 3013, and 7003 of RCRA. A material which is not defined as a solid waste in this part, or is not a hazardous waste identified or listed in this part, is still a solid waste and a hazardous waste for purposes of these sections if:
    (i) In the case of Sections 3007 and 3013, EPA has reason to believe that the material may be a solid waste within the meaning of Section 1004(27) of RCRA and a hazardous waste within the meaning of Section 1004(5) of RCRA; or
    (ii) In the case of Section 7003, the statutory elements are established.

(c) For the purposes of Sections 261.2 and 261.6:
  (1) A "spent material" is any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing;
  (2) "Sludge" has the same meaning used in Section 260.10 of this chapter;
  (3) A "by-product" is a material that is not one of the primary products of a production process and is not solely or separately produced by the production process. Examples are process residues such as slags or distillation column bottoms. The term does not include a co-product that is produced for the general public's use and is ordinarily used in the form it is produced by the process.
  (4) A material is "reclaimed" if it is processed to recover a usable product, or if it is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents.
  (5) A material is "used or reused" if it is either:
    (i) Employed as an ingredient (including use as an intermediate) in an industrial process to make a product (for example, distillation bottoms from one process used as feedstock in another process). However, a material will not satisfy this condition if distinct components of the material are recovered as separate end products (as when metals are recovered from metal-containing secondary materials); or
    (ii) Employed in a particular function or application as an effective substitute for a commercial product (for example, spent pickle liquor used as phosphorous precipitant and sludge conditioner in wastewater treatment).
  (6) "Scrap metal" is bits and pieces of metal parts (e.g.,) bars, turnings, rods, sheets, wire) or metal pieces that may be combined together with bolts or soldering (e.g., radiators, scrap automobiles, railroad box cars), which when worn or superfluous can be recycled.

(7) A material is "recycled" if it is used, reused, or reclaimed.

(8) A material is "accumulated speculatively" if it is accumulated before being recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that -- during the calendar year (commencing on January 1) -- the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period. In calculating the percentage of turnover, the 75 percent requirement is to be applied to each material of the same type (e.g., slags from a single smelting process) that is recycled in the same way (i.e., from which the same material is recovered or that is used in the same way). Materials accumulating in units that would be exempt from regulation under Section 261.4(c) are not to be included in making the calculation. (Materials that are already defined as solid wastes also are not to be included in making the calculation). Materials are no longer in this category once they are removed from accumulation for recycling, however.

261.2 Definition of solid waste.

(a) (1) A solid waste is any discarded material that is not excluded by Section 261.4(a) or that is not excluded by variance granted under Sections 260.30 and 260.31.

(2) A discarded material is any material which is:

(i) Abandoned, as explained in paragraph (b) of this section; or

(ii) Recycled, as explained in paragraph (c) of this section; or

(iii) Considered inherently waste-like, as explained in paragraph (d) of this section or;

(iv) *A military munition* identified as a solid waste in 40 CFR 266.202.

(b) Materials are solid waste if they are abandoned by being:

(1) Disposed of; or

(2) Burned or incinerated; or

(3) Accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated.

(c) Materials are solid wastes if they are recycled--or accumulated, stored, or treated before recycling--as specified in paragraphs (c)(1) through (c)(4) of this section.

(1) Used in a manner constituting disposal.

(i) Materials noted with a "*" in Column 1 of Table 1 are solid wastes when they are:

(A) Applied to or placed on the land in a manner that constitutes disposal; or

(B) Used to produce products that are applied to or placed on the land or are otherwise contained in products that are applied to or placed on the land (in which cases the product itself remains a solid waste).

(ii) However, commercial chemical products listed in Section 261.33 are not solid wastes if they are applied to the land and that is their ordinary manner of use.

(2) Burning for energy recovery.

(i) Materials noted with a "*" in column 2 of Table 1 are solid wastes when they are:

(A) Burned to recover energy;

(B) Used to produce a fuel or are otherwise contained in fuels (in which cases the fuel itself remains a solid waste.

(ii) However, commercial chemical products listed in Section 261.33 are not solid wastes if they are themselves fuels.

(3) Reclaimed. Materials noted with a "*" in column 3 of Table 1 are solid wastes when reclaimed.

(4) Accumulated speculatively. Materials noted with a "*" in column 4 of Table 1 are solid wastes when accumulated speculatively.

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

(1) Hazardous Waste Nos. F020, F021 (unless used as an ingredient to make a product at the site of generation), F022, F023, F026, and F028.

(2) Secondary materials fed to a halogen acid furnace that exhibit a characteristic of a hazardous waste or are listed as a hazardous waste as defined in subparts C or D of this part.

(i) The material must contain a bromine concentration of at least 45 percent: and

(ii) The material must contain less than a total of 1 percent of toxic organic compounds listed in appendix VIII; and

(iii) The material is processed continually on-site in the halogen acid furnace via direct conveyance (hard piping).

(3) The Administrator will use the following criteria to add wastes to that list:

(i) (A) The materials are ordinarily disposed of, burned, or incinerated; or

(B) The materials contain toxic constituents listed in Appendix VIII of Part 261 and these constituents are not ordinarily found in raw materials or products for which the materials substitute (or are found in raw materials or products in smaller concentrations) and are not used or reused during the recycling process; and

(ii) The material may pose a substantial hazard to human health and the environment when recycled.

(e) Materials that are not solid waste when recycled.

(1) Materials are not solid wastes when they can be shown to be recycled by being:

(i) Used or reused as ingredients in an industrial process to make a product, provided the materials are not being reclaimed; or

(ii) Used or reused as effective substitutes for commercial products; or

(iii) Returned to the original process from which they are generated, without first being reclaimed or land disposed. The material must be returned as a substitute for feedstock materials. In cases where the original process to which the material is returned is a secondary process, the materials must be managed such that there is no placement on the land.

(2) The following materials are solid wastes, even if the recycling involves use, reuse, or return to the original process (described in paragraphs (e)(1)(i) through (iii) of this section:

(i) Materials used in a manner constituting disposal, or used to produce products that are applied to the land; or

(ii) Materials burned for energy recovery, used to produce a fuel, or contained in fuels; or

(iii) Materials accumulated speculatively; or

(iv) Materials listed in paragraphs (d)(1) and (d)(2) of this section.

(f) Documentation of claims that materials are not solid wastes or are conditionally exempt from regulation. Respondents in actions to enforce regulations implementing Subtitle C of RCRA who raise a claim that a certain material is not a solid waste, or is conditionally exempt from regulation, must demonstrate that there is a known market or disposition for the material, and that they meet the terms of the exclusion or exemption. In doing so, they must provide appropriate documentation (such as contracts showing that a second person uses the material as an ingredient in a production process) to demonstrate that the material is not a waste, or is exempt from regulation. In addition, owners or operators of facilities claiming that they actually are recycling materials must show that they have the necessary equipment to do so.

TABLE 1

	Use constituting disposal §(261.2(c)(1)) (1)	Energy recovery/ fuel §(261.2(c)(2)) (2)	Reclamation §(261.2(c)(3)) (3)	Speculative accumulation §(261.2(c)(4)) (4)
Spent Materials	(*)	(*)	(*)	(*)
Sludges (listed in 40 CFR Part 261.31 or 261.32)	(*)	(*)	(*)	(*)
Sludges exhibiting a characteristic of hazardous waste	(*)	(*)	.....	(*)
By-products (listed in 40 CFR Part 261.31 or 261.32)	(*)	(*)	(*)	(*)
By-products exhibiting a characteristic of hazardous waste	(*)	(*)	.....	(*)
Commercial chemical products listed in 40 CFR Section 261.33	(*)	(*)	.....	.....
Scrap metal	(*)	(*)	(*)	(*)

Note: The terms "spent materials," "sludges," "by-products," and "scrap metal" are defined in Section 261.1.

261.3 Definition of hazardous waste.

(a) A solid waste, as defined in Section 261.2 is a hazardous waste if:
  (1) It is not excluded from regulation as a hazardous waste under Section 261.4(b); and
  (2) It meets any of the following criteria:
    (i) It exhibits any of the characteristics of hazardous waste identified in Subpart C except that any mixture of a waste from the extraction, beneficiation, and processing of ores and minerals excluded under Section 261.4(b)(7) and any other solid waste exhibiting a characteristic of hazardous waste under subpart C of this part only if it exhibits a characteristic that would not have been exhibited by the excluded waste alone if such mixture had not occurred or if it continues to exhibit any of the characteristics exhibited by the non-excluded wastes prior to mixture. Further, for the purposes of applying the Toxicity Characteristic to such mixtures, the mixture is also a hazardous waste if it exceeds the maximum concentration for any contaminant listed in table I to Section 261.24 that would not have been exceeded by the excluded waste alone if the mixture had not occurred or if it continues to exceed the maximum concentration for any contaminant exceeded by the nonexempt waste prior to mixture.
    (ii) It is listed in Subpart D and has not been excluded from the lists in Subpart D under Sections 260.20 and 260.22 of this chapter.
    (iii) It is a mixture of a solid waste and a hazardous waste that is listed in Subpart D of this part solely because it exhibits one or more of the characteristics of hazardous waste identified in Subpart C of this part, unless the resultant mixture no longer exhibits any characteristic of hazardous waste identified in Subpart C of this part, or unless the solid waste is excluded from regulation under Section 261.4(b)(7) and the resultant mixture no longer exhibits any characteristic of hazardous waste identified in subpart C of this part for which the hazardous waste listed in subpart D of this part was listed. However, nonwastewater mixtures are still subject to the requirements of part 268 of this chapter, even if they no longer exhibit a characteristic at the point of land disposal).
    (iv) It is a mixture of solid waste and one or more hazardous wastes listed in Subpart D and has not been excluded from this paragraph under Sections 260.20 and 260.22 of this chapter; however, the following mixtures of solid wastes and hazardous wastes listed in Subpart D are not hazardous wastes (except by application of paragraph (a)(2)(i) or (ii) of this Section) if the generator can demonstrate that the mixture consists of wastewater the discharge of which is subject to regulation under either Section 402 or Section 307(b) of the Clean Water Act (including wastewater at facilities which have eliminated the discharge of wastewater) and:
      (A) One or more of the following spent solvents listed in Section 261.31-carbon tetrachloride, tetrachloroethylene, trichoroethylene-Provided, That the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 1 part per million; or
      (B) One or more of the following spent solvents listed in Section 261.31-methylene chloride, 1.1.1-trichlorethane, chlorobenzene, o-dichlorobenzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent chlorofluorocarbon solvents-provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pre-treatment system does not exceed 25 parts per million; or
      (C) One of the following wastes listed in Section 261.32 heat exchanger bundle cleaning sludge from the petroleum refining industry (EPA Hazardous Waste No. K050); or
      (D) A discarded commercial chemical product, or chemical intermediate listed in Section 261.33, arising from de minimis losses of these materials from manufacturing operations in which these materials are used as raw materials or are produced in the manufacturing process. For purposes of this subparagraph, "de minimis" losses include those from normal material handling operations (e.g. spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers that are rendered empty by that rinsing; or
      (E) Wastewater resulting from laboratory operations containing toxic (T) wastes listed in Subpart D, Provided, That the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment or

pre-treatment system, or provided the wastes, combined annualized average concentration does not exceed one part per million in the headworks of the facility's wastewater treatment or pre-treatment facility. Toxic (T) wastes used in laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation; or

(F) One or more of the following wastes listed in Section 261.32--wastewaters from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K157)--Provided that the maximum weekly usabe of formaldehyde, methyl choride, methylene chloride, and triethylamine (including all amounts that can not be demonstrated to be reacted in the process, destroyed through treatment, or is recovered, i.e., what is discharged or volatilized) divided by the average weekly flow of process wastewater prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of 5 parts per million by weight; or

(G) Wastewaters derived from the treatment of one or more of the following wastes listed in Section 261.32--organic waste (including heavy ends, still bottoms, light ends spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K156).--Provided, that the maximum concentration of formaldehyde, methyl chloride, methylene chloride, and triethylamine prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of 5 milligrams per liter.

(v) *Rebuttable presumption for used oil.* Used oil containing more than 1000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in subpart D of part 261 of this chapter. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Third Edition, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix VIII of part 261 of this chapter). EPA Publication SW-846, Third Edition, is available for the cost of $110.00 from the Government Printing Office, Superintendent of Documents, PO Box 371954, Pittsburgh, PA 15250-7954. 202-783-3238 (document number 955-001-00000-1).

(A) 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. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.

(B) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

(b) A solid waste which is not excluded from regulation under paragraph (a) (1) of this section becomes a hazardous waste when any of the following events occur:

(1) In the case of a waste listed in Subpart D, when the waste first meets the listing description set forth in Subpart D.

(2) In the case of a mixture of solid waste and one or more listed hazardous wastes, when a hazardous waste listed in Subpart D is first added to the solid waste.

(3) In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in Subpart C.

(c) Unless and until it meets the criteria of paragraph (d):

(1) A hazardous waste will remain a hazardous waste.

(2) (i) Except as otherwise provided in paragraph (c)(2)(ii) of this section, any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust, or leachate (but not including precipitation run-off) is a hazardous waste. (However, materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.)

(ii) The following solid wastes are not hazardous even though they are generated from the treatment, storage, or disposal of a hazardous waste, unless they exhibit one or more of the characteristics of hazardous waste:

(A) Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (SIC Codes 331 and 332).

(B) Wastes from burning any of the materials exempted from regulation by Section 261.6(a)(3) (iv) through (vi).

(C)(1) Nonwastewater residues, such as slag, resulting from high temperature metals recovery (HTMR) processing of K061, K026 or F006 waste, in units identified as rotary kilns, flame reactors, electric furnaces, plasma arc furnaces, slag reactors, rotary hearth furnace/electric furnace combinations or industrial furnaces (as defined in paragraphs (6), (7), and (13) of the definition for "Industrial furnace" in 40 CFR 260.10), that are disposed in Subtitle D units, provided that these residues meet the generic exclusion levels identified in the tables in this paragraph for all constituents, and exhibit no characteristics of hazardous waste. Testing requirements must be incorporated in a facility's waste analysis plan or a generator's self-implementing waste analysis plan; at a minimum, composite samples of residues must be collected and analyzed quarterly and/or when the process or operation generating the waste changes. Persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements.

Constituent	Maximum for any single composite sample TCLP) (mg/l)
Generic exclusion levels for K061 and K062 nonwastewater HTMR residues	
Antimony	0.10
Arsenic	0.50
Barium	7.6
Beryliium	0.010
Cadmium	0.050
Chromium(Total)	0.33
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30
Thallium	0.020
Zinc	70
Generic exclusion levels for F006 nonwastewater HTMR residues	
Antimony	0.10
Arsenic	0.50
Barium	7.6
Beryliium	0.010
Cadmium	0.050
Chromium (Total)	0.33
Cyanide (Total) (mg/kg)	1.8
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30
Thallium	0.020
Zinc	70

(2) A one-time notification and certification must be placed in the facility's files and sent to the EPA region or authorized state for K061, K062 or F006 HTMR residues that meet the generic exclusion levels for all contituents and do not exhibit any characteristics that are sent to subtitle D units. The notification and certification that is placed in the generators or treaters files must be updated if the process or operation generating the waste changes and/or if the subtitle D unit receiving the waste changes. However, the generator or treater need only notify the EPA region or an authorized state on an annual basis if such changes occur. Such notification and certification should be sent to the EPA region or authorized state by the end of the calendar year, but no later than December 31. The notification must include the following information: The name and address of the subtitle D unit receiving the waste shipments; the EPA Hazardous Waste Number(s) and treatability group(s) at the initial point of generation; and, the treatment standards applicable to the waste at the initial point of generation. The certification must be signed by an authorized representative and must state as follows: "I certify under penalty of law that the generic exclusion levels for all constituents have been met without impermissible dilution and that no characteristic of hazardous waste is exhibited. I am aware that there are significant penalties for submitting a false certification, including the possiblity of fine and imprisonment."

(D) Biological treatment sludge from the treatment of one of the following wastes listed in Section 261.32--organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K156), and wastewaters from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K157).

(d) Any solid waste described in paragraph (c) of this section is not a hazardous waste if it meets the following criteria:

(1) In the case of any solid waste, it does not exhibit any of the characteristics of hazardous waste identified in Subpart C. (However, wastes that exhibit a characteristic at the point of generation may still be subject to the requirements of Part 268, even if they no longer exhibit a characteristic at the point of land disposal.)

(2) In the case of a waste which is a listed waste under Subpart D, contains a waste listed under Subpart D or is derived from a waste listed in Subpart D, it also has been excluded from paragraph (c) under Sections 260.20 and 260.22 of this chapter.

(e) Reserved

(f) Notwithstanding paragraphs (a) through (d) of this section and provided the debris as defined in part 268 of this chapter does not exhibit a characteristic identified at subpart C of this part, the following materials are not subject to regulation under 40 CFR parts 260, 261 to 266, 268, or 270:

(1) Hazardous debris as defined in part 268 of this chapter that has been treated using one of the required extraction or destruction technologies specified in Table 1 of Section 268.45 of this chapter; persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements; or

(2) Debris as defined in part 268 of this chapter that the Regional Administrator, considering the extent of contamination, has determined is no longer contaminated with hazardous waste.

261.4 Exclusions.

(a) *Materials which are not solid wastes.* The following materials are not solid wastes for the purpose of this Part:

(1) (i) Domestic sewage; and

(ii) Any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly-owned treatment works for treatment. "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.

(2) Industrial wastewater discharges that are point source discharges subject to regulation under Section 402 of the Clean Water Act, as amended.

[Comment: This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment.]

(3) Irrigation return flows.

(4) Source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq.

(5) Materials subjected to in-situ mining techniques which are not removed from the ground as part of the extraction process.

(6) Pulping liquors (i.e., black liquor) that are reclaimed in a pulping liquor recovery furnace and then reused in the pulping process, unless it is accumulated speculatively as defined in Section 261.1(c) of this chapter.

(7) Spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively as defined in Section 261.1(c) of this chapter.

(8) Secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process provided:

(i) Only tank storage is involved, and the entire process through completion of reclamation is closed by being entirely connected with pipes or other comparable enclosed means of conveyance:

(ii) Reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces, or incinerators):

(iii) The secondary materials are never accumulated in such tanks for over twelve months without being reclaimed; and

(iv) The reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal.

(9) Spent wood preserving solutions that have been used and are reclaimed and reused for their original intended purpose.

(i) Spent wood preserving solutions that have been reclaimed and are reused for their original intended purpose; and

(ii) wastewaters from the wood preserving process that have been reclaimed and are reused to treat wood.

(10) EPA Hazardous Waste Nos. K060, K087, K141, K142, K143, K144, K145, K147, and K148, and any wastes from the coke by-products processes that are hazardous only because they exhibit the Toxicity Characteristic (TC) specified in Section 261.24 of this part when, subsequent to generation, these materials are recycled to coke ovens, to the tar recovery process as a feedstock to produce coal tar or mixed with coal tar prior to the tar's sale or refining. This exclusion is conditioned on there being no land disposal of the wastes from the point they are generated to the point they are recycled to coke ovens or tar recovery or refining processes, or mixed with coal tar.

(11) Nonwastewater splash condenser dross residue from the treatment of K061 in high temperature metals recovery units, provided it is shipped in drums (if shipped) and not land disposed before recovery.

(12) Recovered oil from petroleum refining, exploration and production, and from transportation incident thereto, which is to be inserted into the petroleum refining process (SIC Code 2911) at or before a point (other than direct insertion into a coker) where contaminants are removed. This exclusion applies to recovered oil stored or transported prior to insertion, except that the oil must not be stored in a manner involving placement on the land, and must not be accumulated speculatively, before being so recycled. Recovered oil is oil that has been reclaimed from secondary materials (such as wastewater) generated from normal petroleum refining, exploration and production, and transportation practices. Recovered oil includes oil that is recovered from refinery wastewater collection and treatment systems, oil recovered from oil and gas drilling operations, and oil recovered from wastes removed from crude oil storage tanks. Recovered oil does not include (among other things) oil-bearing hazardous wastes listed in 40 CFR part 261 D (e.g., K048-K052, F037, F038). However, oil recovered from such wastes may be considered recovered oil. Recovered oil also does not include used oil as defined in 40 CFR 279.1.

(b) Solid wastes which are not hazardous wastes. The following solid wastes are not hazardous wastes:

(1) Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (e.g., refuse-derived fuel), or reused. "Household waste" means any material (including garbage, trash and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas). A resource recovery facility managing municipal solid waste shall not be deemed to be treating, storing, disposing of, or otherwise managing hazardous wastes for the purposes of regulation under this subtitle, if such facility:

(i) Receives and burns only:

(A) Household waste (from single and multiple dwellings, hotels, motels, and other residential sources) and

(B) Solid waste from commercial or industrial sources that does not contain hazardous waste; and

(ii) Such facility does not accept hazardous wastes and the owner or operator of such facility has established contractual requirements or other appropriate notification or inspection procedures to assure that hazardous wastes are not received at or burned in such facility.

(2) Solid wastes generated by any of the following and which are returned to the soils as fertilizers:
  (i) The growing and harvesting of agricultural crops.
  (ii) The raising of animals, including animal manures.

(3) Mining overburden returned to the mine site.

(4) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste, generated primarily from the combustion of coal or other fossil fuels, except as provided by Section 266.112 of this chapter for facilities that burn or process hazardous waste.

(5) Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy.

(6) (i) Wastes which fail the test for the Toxicity Characteristic because chromium is present or are listed in Subpart D due to the presence of chromium, which do not fail the test for the Toxicity Characteristic for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that:
    (A) The chromium in the waste is exclusively (or nearly exclusively) trivalent chromium; and
    (B) The waste is generated from an industrial process which uses trivalent chromium exclusively (or nearly exclusively) and the process does not generate hexavalent chromium; and
    (C) The waste is typically and frequently managed in non-oxidizing environments.

  (ii) Specific wastes which meet the standard in paragraphs (b)(6)(i)(A), (B) and (C) (so long as they do not fail the test for the toxicity characteristic for any other constituent, and do not exhibit any other characteristic) are:
    (A) Chrome (blue) trimmings generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.
    (B) Chrome (blue) shavings generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.
    (C) Buffing dust generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue.
    (D) Sewer screenings generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.
    (E) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.
    (F) Wastewater treatment sludges generated by the following subcategories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.
    (G) Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries.
    (H) Wastewater treatment sludges from the production of TiO_2 pigment using chromium-bearing ores by the chloride process.

(7) Solid waste from the extraction, beneficiation, and processing of ores and minerals (including coal), phosphate rock and overburden from the mining of uranium ore, except as provided by Section 266.112 of this chapter for facilities that burn or process hazardous waste. For the purposes of Section 261.4(b)(7), beneficiation of ores and minerals is restricted to the following activities: crushing; grinding; washing; dissolution; crystallization; filtration; sorting; sizing; drying; sintering; pelletizing; briquetting; calcining to remove water and/or carbon dioxide; roasting, autoclaving, and/or chlorination in preparation for leaching (except where the roasting (and/or autoclaving and/or chlorination)/leaching sequence produces a final or intermediate product that does not undergo further beneficiation or processing); gravity concentration; magnetic separation; electrostatic separation; flotation; ion exchange; solvent extraction; electrowinning; precipitation; amalgamation; and heap, dump, vat, tank, and in situ leaching. For the purposes of Section 261.4(b)(7), solid waste from the processing or ores and minerals will include only the following wastes, until EPA completes a report to Congress and a regulatory determination on their ultimate regulatory status:
  (i) Slag from primary copper processing;
  (ii) Slag from primary lead processing;
  (iii) Red and brown muds from bauxite refining;

(iv) Phosphogypsum from phosphoric acid production;
(v) Slag from elemental phosphorus production;
(vi) Gasifier ash from coal gasification;
(vii) Process wastewater from coal gasification;
(viii) Calcium sulfate wastewater treatment plant sludge from primary copper processing;
(ix) Slag tailings from primary copper processing;
(x) Fluorogypsum from hydrofluoric acid production;
(xi) Process wastewater from hydrofluoric acid production;
(xii) Air pollution control dust/sludge from iron blast furnaces;
(xiii) Iron blast furnace slag;
(xiv) Treated residue from roasting/leaching of chrome ore;
(xv) Process wastewater from primary magnesium processing by the anhydrous process;
(xvi) Process wastewater from phosphoric acid production;
(xvii) Basic oxygen furnace and open hearth furnace air pollution control dust-sludge from carbon steel production;
(xviii) Basic oxygen furnace and open hearth furnace slag from carbon steel production;
(xix) Chloride process waste solids from titanium tetrachloride production;
(xx) Slag from primary zinc processing.

(8) Cement kiln dust waste, except as provided by Section 266.112 of this chapter for facilities that burn or process hazardous waste.

(9) Solid waste which consists of discarded arsenical-treated wood or wood products which fails the test for the Toxicity Characteristic for Hazardous Waste Codes D004 through D017 and which is not a hazardous waste for any other reason if the waste is generated by persons who utilize the arsenical-treated wood and wood product for these materials' intended end use.

(10) Petroleum-contaminated media and debris that fail the test for the Toxicity Characteristic of Section 261.24 (Hazardous Waste Codes D018 through D043 only) and are subject to the corrective action regulations under part 280 of this chapter.

(11) Injected groundwater that is hazardous only because it exhibits the Toxicity Characteristic (Hazardous Waste Codes D018 through D043 only) in Section 261.24 of this part that is reinjected through an underground injection well pursuant to free phase hydrocarbon recovery operations undertaken at petroleum refineries, petroleum marketing terminals, petroleum bulk plants, petroleum pipelines, and petroleum transportation spill sites until January 25, 1993. This extension applies to recovery operations in existence, or for which contracts have been issued, on or before March 25, 1991. For groundwater returned through infiltration galleries from such operations at petroleum refineries, marketing terminals, and bulk plants, until (insert date six months after publication). New operations involving injection wells (beginning after March 25, 1991) will qualify for this compliance date extension (until January 25, 1993) only if:

(i) Operations are performed pursuant to a written state agreement that includes a provision to assess the groundwater and the need for further remediation once the free phase recovery is completed; and

(ii) A copy of the written agreement has been submitted to: Characteristics Section (OS-333), U. S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460.

(12) Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems that use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle, provided the refrigerant is reclaimed for further use.

(13) Non-terne plated used oil filters that are not mixed with wastes listed in Subpart D of this part if these oil filters have been gravity hot-drained using one of the following methods:

(i) Puncturing the filter anti-drain back valve or the filter dome end and hot-draining,
(ii) Hot-draining and crushing;
(iii) Dismantling and hot-draining; or
(iv) Any other equivalent hot-draining method that will remove used oil.

(14) Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products.

(c) Hazardous wastes which are exempted from certain regulations. A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste-treatment-manufacturing unit, is not subject to regulation under Parts 262 through 265, 268, 270, 271, and 124 of this chapter or to the notification requirements of Section 3010 of RCRA until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the unit more than 90 days after the unit ceases to be operated for manufacturing, or for storage or transportation of product or raw materials.

(d) Samples.

(1) Except as provided in paragraph (d)(2) of this section, a sample of solid waste or a sample of water, soil, or air, which is collected for the sole purpose of testing to determine its characteristics or composition, is not subject to any requirements of this part or Parts 262 through 268 or Parts 270 or 124 of this chapter or to the notification requirements of Section 3010 of RCRA, when:

(i) The sample is being transported to a laboratory for the purpose of testing; or

(ii) The sample is being transported back to the sample collector after testing; or

(iii) The sample is being stored by the sample collector before transport to a laboratory for testing; or

(iv) The sample is being stored in a laboratory before testing; or

(v) The sample is being stored in a laboratory after testing but before it is returned to the sample collector; or

(vi) The sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).

(2) In order to qualify for the exemption in paragraph (d)(1)(i) and (ii) of this section, a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector must:

(i) Comply with U.S. Department of Transportation (DOT), U.S. Postal Service (USPS), or any other applicable shipping requirements; or

(ii) Comply with the following requirements if the sample collector determines that DOT, USPS, or other shipping requirements do not apply to the shipment of the sample:

(A) Assure that the following information accompanies the sample:

(1) The sample collector's name, mailing address, and telephone number;

(2) The laboratory's name, mailing address, and telephone number;

(3) The quantity of the sample;

(4) The date of shipment; and

(5) A description of the sample.

(B) Package the sample so that it does not leak, spill, or vaporize from its packaging.

(3) This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in paragraph (d)(1) of this section.

(e) Treatability Study Samples

(1) Except as provided in paragraph (e)(2) of this section, persons who generate or collect samples for the purpose of conducting treatability studies as defined in section 260.10 are not subject to any requirement of Parts 261 through 263 of this chapter or to the notification requirements of Section 3010 of RCRA, nor are such samples included in the quantity determinations of Section 261.5 and Section 262.34(d) when:

(i) The sample is being collected and prepared for transportation by the generator or sample collector, or

(ii) The sample is being accumulated or stored by the generator or sample collector prior to transportation to a laboratory or testing facility, or

(iii) The sample is being transported to the laboratory or testing facility for the purpose of conducting a treatability study.

(2) The exemption in paragraph (e)(1) of this section is applicable to samples of hazardous waste being collected and shipped for the purpose of conducting treatability studies provided that:

(i) The generator or sample collector uses (in "treatability studies") no more than 10,000 kg of media contaminated with non-acute hazardous waste, 1000 kg of non-acute hazardous waste other than contaminated media, 1 kg of acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste for each process being evaluated for each generated waste stream; and

(ii) The mass of each sample shipment does not exceed 10,000 kg; the 10,000 kg quantity may be all media contaminated with non-acute hazardous waste, or may include 2500 kg of media contaminated with acute hazardous waste, 1000 kg of hazardous waste, and 1 kg of acute hazardous waste, and

(iii) The sample must be packaged so that it will not leak, spill, or vaporize from its packaging during shipment and the requirements of paragraph A or B of this subparagraph are met.

(A) The transportation of each sample shipment complies with U.S. Department of Transportation (DOT), U.S. Postal Service (USPS), or any other applicable shipping requirements; or

(B) If the DOT, USPS, or other shipping requirements do not apply to the shipment of the sample, the following information must accompany the sample:

(1) The name, mailing address, and telephone number of the originator of the sample.

(2) The name, address, and telephone number of the facility that will perform the treatability study;
(3) The quantity of the sample;
(4) The date of shipment; and
(5) A description of the sample, including its EPA Hazardous Waste Number.

(iv) The sample is shipped to a laboratory or testing facility which is exempt under Section 261.4(f) or has an appropriate RCRA permit or interim status.

(v) The generator or sample collector maintains the following records for a period ending 3 years after completion of the treatability study:
(A) Copies of the shipping documents;
(B) A copy of the contract with the facility conducting the treatability study;
(C) Documentation showing:
(1) The amount of waste shipped under this exemption;
(2) The name, address, and EPA identification number of the laboratory or testing facility that received the waste;
(3) The date the shipment was made; and
(4) Whether or not unused samples and residues were returned to the generator.

(vi) The generator reports the information required under paragraph (e)(v)(C) of this section in its biennial report.

(3) The Regional Administrator may grant requests on a case-by-case basis for up to an additional two years for treatability studies involving bioremediation. The Regional Administrator may grant requests on a case-by-case basis for quantity limits in excess of those specified in paragraphs (e)(2)(i) and (ii) and (f)(4) of this section, for up to an additional 5000 kg of media contaminated with non-acute hazardous waste, 500 kg of non-acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste and 1 kg of acute hazardous waste:

(i) In response to requests for authorization to ship, store and conduct treatability studies on additional quantities in advance of commencing treatability studies. Factors to be considered in reviewing such requests include the nature of the technology, the type of process (e.g., batch versus continuous), size of the unit undergoing testing (particularly in relation to scale-up considerations), the time/quantity of material required to reach steady state operating conditions, or test design considerations such as mass balance calculations.

(ii) In response to requests for authorization to ship, store and conduct treatability studies on additional quantities after initiation or completion of initial treatability studies, when: There has been an equipment or mechanical failure during the conduct of a treatability study; there is a need to verify the results of a previously conducted treatability study; there is a need to study and analyze alternative techniques within a previously evaluated treatment process; or there is a need to do further evaluation of an ongoing treatability study to determine final specifications for treatment.

(iii) The additional quantities and timeframes allowed in paragraph (e)(3) (i) and (ii) of this section are subject to all the provisions in paragraphs (e)(1) and (e)(2)(iii) through (vi) of this section. The generator or sample collector must apply to the Regional Administrator in the Region where the sample is collected and provide in writing the following information:
(A) The reason why the generator or sample collector requires additional time or quantity of sample for treatability study evaluation and the additional time or quantity needed.
(B) Documentation accounting for all samples of hazardous waste from the waste stream which have been sent for or undergone treataability studies including the date each previous sample from the waste stream was shipped, the quantity of each previous shipment, the laboratory or testing facility to which it was shipped, what treatability study processes were conducted on each sample shipped, and the available results on each treatability study;
(C) A description of the technical modifications or change in specifications which will be evaluated and the expected results;
(D) If such further study is being required due to equipment or mechanical failure, the applicant must include information regarding the reason for the failure or breakdown and also include what procedures or equipment improvements have been made to protech against further breakdowns; and
(E) Such other information that the Regional Administrator considers necessary.

(f) *Samples Undergoing Treatability Studies at Laboratories and Testing Facilities.*

Samples undergoing treatability studies and the laboratory or testing facility conducting such treatability studies (to the extent such facilities are not otherwise subject to RCRA requirements) are not subject to any requirement of this Part, Part 124, Parts 262-266, 268, and 270, or to the notification requirements of Section 3010 of RCRA provided that the conditions of paragraphs (f) (1) through (11) of this section are met. A mobile treatment unit (MTU) may qualify as a testing facility subject to paragraphs (f) (1) through (11) of this section. Where a group of MTUs are located at the same site, the limitations specified in
(f) (1) through (11) of this section apply to the entire group of MTUs collectively as if the group were one MTU.

(1) No less than 45 days before conducting treatability studies, the facility notifies the Regional Administrator, or State Director (if located in an authorized State), in writing that it intends to conduct treatability studies under this paragraph.

(2) The laboratory or testing facility conducting the treatability study has an EPA identification number.

(3) No more than a total of 10,000 kg of "as received" media contaminated with non-acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste or 250 kg of other "as received" hazardous waste is subject to initiation of treatment in all treatability studies in any single day. "As received" waste refers to the waste as received in the shipment from the generator or sample collector.

(4) The quantity of "as received" hazardous waste stored at the facility for the purpose of evaluation in treatability studies does not exceed 10,000 kg, the total of which can include 10,000 kg of media contaminated with non-acute hazardous waste, 2500 kg of media contaminated with acute hazardous waste, 1000 kg of non-acute hazardous wastes other than contaminated media and 1 kg of acute hazardous waste. This quantity limitation does not include treatment materials (including nonhazardous solid waste) added to "as received" hazardous waste.

(5) No more than 90 days have elapsed since the treatability study for the sample was completed, or no more than one year (two years for treatability studies involving bioremediation) have elapsed since the generator or sample collector shipped the sample to the laboratory or testing facility, whichever date first occurs. Up to 500 kg of treated material from a particular waste stream from treatability studies may be archived for future evaluation up to five years from the date of initial receipt. Quantities of materials archived are counted against the total storage limit for the facility.

(6) The treatability study does not involve the placement of hazardous waste on the land or open burning of hazardous waste.

(7) The facility maintains records for 3 years following completion of each study that show compliance with the treatment rate limits and the storage time and quantity limits. The following specific information must be included for each treatability study conducted:

(i) The name, address, and EPA identification number of the generator or sample collector of each waste sample;

(ii) The date the shipment was received;

(iii) The quantity of waste accepted;

(iv) The quantity of "as received" waste in storage each day;

(v) The date the treatment study was initiated and the amount of "as received" waste introduced to treatment each day;

(vi) The date the treatability study was concluded;

(vii) The date any unused sample or residues generated from the treatability study were returned to the generator or sample collector or, if sent to a designated facility, the name of the facility and the EPA identification number.

(8) The facility keeps, on-site, a copy of the treatability study contract and any shipping papers associated with the transport of treatability study samples to and from the facility for a period ending 3 years from the completion date of each treatability study.

(9) The facility prepares and submits a report to the Regional Administrator, or State Director (if located in an authorized State), by March 15 of each year that estimates the number of studies and the amount of waste expected to be used in treatability studies during the current year, and includes the following information for the previous calendar year:

(i) The name, address, and EPA identification number of the facility conducting the treatability studies;

(ii) The types (by process) of treatability studies conducted;

(iii) The names and addresses of persons for whom studies have been conducted (including their EPA identification numbers);

(iv) The total quantity of waste in storage each day;

(v) The quantity and types of waste subjected to treatability studies;

(vi) When each treatability study was conducted;

(vii) The final disposition of residues and unused sample from each treatability study.

(10) The facility determines whether any unused sample or residues generated by the treatability study are hazardous waste under Section 261.3 and, if so, are subject to Parts 261 through 268, and Part 270 of this Chapter, unless the residues and unused samples are returned to the sample originator under the Section 261.4(e) exemption.

(11) The facility notifies the Regional Administrator, or State Director (if located in an authorized State), by letter when the facility is no longer planning to conduct any treatability studies at the site.

261.5 Special requirements for hazardous waste generated by conditionally exempt small quantity Generators.

(a) A generator is a conditionally exempt small quantity generator in a calendar month if he generates no more than 100 kilograms of hazardous waste in that month.

(b) Except for those wastes identified in paragraphs (e), (f), (g), and (j) of this section, a conditionally exempt small quantity generator's hazardous wastes are not subject to regulation under Parts 262 through 266, 268 and Parts 270 and 124 of this chapter, and the notification requirements of Section 3010 of RCRA, provided the generator complies with the requirements of paragraphs (f), (g), and (j) of this section.

(c) When making the quantity determinations of this part and 40 CFR part 262, the generator must include all hazardous waste that it generates, except hazardous waste that:
  (1) Is exempt from regulation under 40 CFR 261.4(c) through (f), 261.6(a)(3), 261.7(a)(1), or 261.8; or
  (2) Is managed immediately upon generation only in on-site elementary neutralization units, wastewater treatment units, or totally enclosed treatment facilities as defined in 40 CFR 260.10; or
  (3) Is recycled, without prior storage or accumulation, only in an on-site process subject to regulation under 40 CFR 261.6(c)(2); or
  (4) Is used oil managed under the requirements of 40 CFR 261.6(a)(4) and 40 CFR part 279; or
  (5) Is spent lead-acid batteries managed under the requirements of 40 CFR part 266, subpart G; or
  (6) Is universal waste managed under 40 CFR 261.9 and 40 CFR part 273.

(d) In determining the quantity of hazardous waste generated, a generator need not include:
  (1) Hazardous waste when it is removed from on-site storage; or
  (2) Hazardous waste produced by on-site treatment (including reclamation) of his hazardous waste, so long as the hazardous waste that is treated was counted once; or
  (3) Spent materials that are generated, reclaimed, and subsequently reused on-site, so long as such spent materials have been counted once.

(e) If a generator generates acute hazardous waste in a calendar month in quantities greater than set forth below, all quantities of that acute hazardous waste are subject to full regulation under Parts 262 through 266, 268 and Parts 270 and 124 of this chapter, and the notification requirements of Section 3010 of RCRA:
  (1) A total of one kilogram of acute hazardous wastes listed in Sections 261.31, 261.32, or 261.33(e).
  (2) A total of 100 kilograms of any residue or contaminated soil, waste, or other debris resulting from the clean-up of a spill, into or on any land or water of any acute hazardous wastes listed in Sections 261.31, 261.32, or 261.33(e).

[Comment: "Full regulation" means those regulations applicable to generators of greater than 1,000 kg of non-acutely hazardous waste in a calendar month.]

(f) In order for acute hazardous wastes generated by a generator of acute hazardous wastes in quantities equal to or less than those set forth in paragraph (e)(1) or (e)(2) of this section to be excluded from full regulation under this section, the generator must comply with the following requirements:
  (1) Section 262.11 of this chapter;
  (2) The generator may accumulate acute hazardous waste on-site. If he accumulates at any time acute hazardous wastes in quantities greater than those set forth in paragraph (e)(1) or (e)(2) of this section, all of those accumulated wastes are subject to regulation under Parts 262 through 266, 268 and Parts 270 and 124 of this chapter, and the applicable notification requirements of section 3010 of RCRA. The time period of Section 262.34(d) of this chapter, for accumulation of wastes on-site begins when the accumulated wastes exceed the applicable exclusion limit.
  (3) A conditionally exempt small quantity generator may either treat or dispose of his acute hazardous waste in an on-site facility or ensure delivery to an off-site treatment, storage, or disposal facility, either of which, if located in the U.S., is:
    (i) Permitted under Part 270 of this chapter;
    (ii) In interim status under Parts 270 and 265 of this chapter;

(iii) Authorized to manage hazardous waste by a State with a hazardous waste management program approved under Part 271 of this chapter;

(iv) Permitted, licensed, or registered by a State to manage municipal solid waste and, if managed in a municipal solid waste landfill is subject to Part 258 of this chapter;

(v) Permitted, licensed, or registered by a State to manage non-municipal non-hazardous waste and, if managed in a non-municipal non-hazardous waste disposal unit after January 1, 1998, is subject to the requirements in Sections 257.5 through 257.30 of this chapter; or

(vi) A facility which:

(A) Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or

(B) Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation; or

(vii) For universal waste managed under part 273 of this chapter, a universal waste handler or destination facility subject to the requirements of part 273 of this chapter.

(g) In order for hazardous waste generated by a conditionally exempt small quantity generator in quantities of less than 100 kilograms of hazardous waste during a calendar month to be excluded from full regulation under this section, the generator must comply with the following requirements:

(1) Section 262.11 of this chapter;

(2) The conditionally exempt small quantity generator may accumulate hazardous waste on-site. If he accumulates at any time more than a total of 1000 kilograms of his hazardous wastes, all of those accumulated wastes are subject to regulation under the special provisions of Part 262 applicable to generators of between 100 kg and 1000 kg of hazardous waste in a calendar month as well as the requirements of Parts 263 through 266, 268 and Parts 270 and 124 of this chapter, and the applicable notification requirements of Section 3010 of RCRA. The time period of Section 262.34(d) for accumulation of wastes on-site begins for a conditionally exempt small quantity generator when the accumulated wastes exceed 1000 kilograms:

(3) A conditionally exempt small quantity generator may either treat or dispose of his hazardous waste in an on-site facility or ensure delivery to an off-site treatment, storage, or disposal facility, either of which, if located in the U.S., is:

(i) Permitted under Part 270 of this chapter;

(ii) In interim status under Parts 270 and 265 of this chapter;

(iii) Authorized to manage hazardous waste by a State with a hazardous waste management program approved under part 271 of this chapter.

(iv) Permitted, licensed, or registered by a State to manage municipal or industrial solid waste;

(v) Permitted, licensed, or registered by a State to manage non-municipal non-hazardous waste and, if managed in a non-municipal non-hazardous waste disposal unit after January 1, 1998, is subject to the requirements in Section 257.5 through 257.30 of this chapter; or

(vi) A facility which:

(A) Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or

(B) Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation; or

(vii) For universal waste managed under part 273 of this chapter, a universal waste handler or destination facility subject to the requirements of part 273 of this chapter.

(h) Hazardous waste subject to the reduced requirements of this section may be mixed with non-hazardous waste and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity limitations identified in this section, unless the mixture meets any of the characteristics of hazardous waste identified in Subpart C.

(i) If any person mixes a solid waste with a hazardous waste that exceeds a quantity exclusion level of this section, the mixture is subject to full regulation.

(j) If a conditionally exempt small quantity generator's wastes are mixed with used oil, the mixture is subject to part 279 of this chapter if it is destined to be burned for energy recovery. Any material produced from such a mixture by processing, blending, or other treatment is also so regulated if it is destined to be burned for energy recovery.

{Note: State rules for off-site recycling are found in Rule .0013, Paragraph (m).}

261.6 Requirements for recyclable materials.

(a) (1) Hazardous wastes that are recycled are subject to the requirements for generators, transporters, and storage facilities of paragraphs (b) and (c) of this section, except for the materials listed in paragraphs (a)(2) and (a)(3) of this section. Hazardous wastes that are recycled will be known as "recyclable materials."

(2) The following recyclable materials are not subject to the requirements of this section but are regulated under Subparts C through H of Part 266 of this chapter and all applicable provisions in Parts 270 and 124 of this chapter:
  (i) Recyclable materials used in a manner constituting disposal (Subpart C);
  (ii) Hazardous wastes burned for energy recovery in boilers and industrial furnaces that are not regulated under Subpart O of Part 264 or 265 of this chapter (Subpart H);
  (iii) Recyclable materials from which precious metals are reclaimed (Subpart F);
  (iv) Spent lead-acid batteries that are being reclaimed (Subpart G).

(3) The following recyclable materials are not subject to regulation under Parts 262 through 266, or Parts 268, 270 or 124 of this chapter, and are not subject to the notification requirements of Section 3010 of RCRA:
  (i) Industrial ethyl alcohol that is reclaimed, except that, unless provided otherwise in an international agreement as specified in Section 262.58:
    (A) A person initiating a shipment for reclamation in a foreign country, and any intermediary arranging for the shipment, must comply with the requirements applicable to a primary exporter in Sections 262.53, 262.56 (a)(1)-(4),(6), and (b), and 262.57, export such materials only upon consent of the receiving country and in conformance with the EPA Acknowledgment of Consent as defined in Subpart E of Part 262, and provide a copy of the EPA Acknowledgment of Consent to the shipment to the transporter transporting the shipment for export;
    (B) Transporters transporting a shipment for export may not accept a shipment if he knows the shipment does not conform to the EPA Acknowledgment of Consent, must ensure that a copy of the EPA Acknowledgment of Consent accompanies the shipment and must ensure that it is delivered to the facility designated by the person initiating the shipment.
  (ii) Used batteries (or used battery cells) returned to a battery manufacturer for regeneration;
  (iii) Scrap metal.
  (iv) Fuels produced from the refining of oil-bearing hazardous waste along with normal process streams at a petroleum refining facility if such wastes result from normal petroleum refining, production, and transportation practices (this exemption does not apply to fuels produced from oil recovered from oil-bearing hazardous waste, where such recovered oil is already excluded under Section 261.4(a)(12);
  (v) (A) Hazardous waste fuel produced from oil-bearing hazardous wastes from petroleum refining, production, or transportation practices, or produced from oil reclaimed from such hazardous wastes, where such hazardous wastes are reintroduced into a process that does not use distillation or does not produce products from crude oil so long as the resulting fuel meets the used oil specification under Section 266.40(e) of this chapter and so long as no other hazardous wastes are used to produce the hazardous waste fuel;
    (B) Hazardous waste fuel produced from oil-bearing hazardous waste from petroleum refining production, and transportation practices, where such hazardous wastes are reintroduced into a refining process after a point at which contaminants are removed, so long as the fuel meets the used oil fuel specification under Section 266.40(e) of this chapter; and
    (C) Oil reclaimed from oil-bearing hazardous wastes from petroleum refining, production, and transportation practices, which reclaimed oil is burned as a fuel without reintroduction to a refining process, so long as the reclaimed oil meets the used oil fuel specification under Section 266.40(e) of this chapter; and
  (vi) Petroleum coke produced from petroleum refinery hazardous wastes containing oil by the same person who generated the waste, unless the resulting coke product exceeds one or more of the characteristics of hazardous waste in part 261, subpart C.

(4) Used oil that is recycled and is also a hazardous waste solely because it exhibits a hazardous characteristic is not subject to the requirements of parts 260 through 268 of this chapter, but is regulated under part 279 of this chapter. Used oil that is recycled includes any used oil which is reused, following its original use, for any purpose (including the purpose for which the oil was originally used). Such term includes, but is not limited to, oil which is re-refined, reclaimed, burned for energy-recovery, or reprocessed.

(5) Hazardous waste that is exported to or imported from designated member countries of the Organization for Economic Cooperation and development (OECD) (as defined in Section 262.58(a)(1)) for purpose of recovery is subject to the requirements of 40 CFR part 262, subpart H, if it is subject to either the Federal manifesting requirements of 40 CFR Part 262, to the universal waste management standards of 40 CFR Part 273, or to State requirements analogous to 40 CFR Part 273.

(b) Generators and transporters of recyclable materials are subject to the applicable requirements of Parts 262 and 263 of this chapter and the notification requirements under Section 3010 of RCRA, except as provided in paragraph (a) of this section.

(c) (1) Owners and operators of facilities that store recyclable materials before they are recycled are regulated under all applicable provisions of Subparts A through L, AA, BB, and CC of Parts 264 and 265, and under Parts 124, 266, 268, and 270 of this chapter and the notification requirements under Section 3010 of RCRA, except as provided in paragraph (a) of this section. (The recycling process itself is exempt from regulation except as provided in Section 261.6(d).)

(2) Owners or operators of facilities that recycle recyclable materials without storing them before they are recycled are subject to the following requirements, except as provided in paragraph (a) of this section:

(i) Notification requirements under Section 3010 of RCRA;

(ii) Sections 265.71 and 265.72 (dealing with the use of the manifest and manifest discrepancies) of this chapter;

(iii) Section 261.6(d) of this chapter.

(d) Owners or operators of facilities subject to RCRA permitting requirements with hazardous waste management units that recycle hazardous wastes are subject to the requirements of subparts AA and BB of part 264 or 265 of this chapter.

261.7 Residues of hazardous waste in empty containers.

(a) (1) Any hazardous waste remaining in either (i) an empty container or (ii) an inner liner removed from an empty container, as defined in paragraph (b) of this section, is not subject to regulation under Parts 261 through 265, or Part 268, 270 or 124 of this chapter or to the notification requirements of Section 3010 of RCRA.

(2) Any hazardous waste in either (i) a container that is not empty or (ii) an inner liner removed from a container that is not empty, as defined in paragraph (b) of this section, is subject to regulation under Parts 261 through 265, and Parts 268, 270 and 124 of this chapter and to the notification requirements of Section 3010 of RCRA.

(b) (1) A container or an inner liner removed from a container that has held any hazardous waste, except a waste that is a compressed gas or that is identified as an acute hazardous waste listed in Sections 261.31, 261.32, or 261.33(e) of this chapter is empty if:

(i) All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating, and

(ii) No more than 2.5 centimeters (one inch) of residue remain on the bottom of the container or inner liner, or

(iii) (A) 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 less than or equal to 110 gallons in size, or

(B) No more than 0.3 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.

(2) A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric.

(3) A container or an inner liner removed from a container that has held an acute hazardous waste listed in Sections 261.31, 261.32, or 261.33(e) is empty if:

(i) The container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;

(ii) The container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or

(iii) In the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container, has been removed.

261.8 PCB Wastes Regulated Under Toxic Substance Control Act.

The disposal of PCB-containing dielectric fluid and electric equipment containing such fluid authorized for use and regulated under part 761 of this chapter and that are hazardous only because they fail the test for the Toxicity Characteristic Hazardous Waste Codes D018 through D043 only) are exempt from regulation under parts 261 through 265, and parts 268, 270, and 124 of this chapter, and the notification requirements of section 3010 of RCRA.

261.9 Requirements for Universal Waste.

The wastes listed in this section are exempt from regulation under parts 262 through 270 of this chapter except as specified in part 273 of this chapter and therefore are not fully regulated as hazardous waste. The wastes listed in this section are subject to regulation under 40 CFR part 273:

(a) Batteries as described in 40 CFR 273.2;
(b) Pesticides as described in 40 CFR 273.3; and
(c) Thermostats as described in 40 CFR 273.4.

(b) 40 CFR 261.10 through 261.11 (Subpart B), "Criteria for Identifying the Characteristics of Hazardous Waste and for Listing Hazardous Waste", are incorporated by reference including subsequent amendments and editions.

SUBPART B - CRITERIA FOR IDENTIFYING THE CHARACTERISTICS OF HAZARDOUS WASTE AND FOR LISTING HAZARDOUS WASTE

261.10 Criteria for identifying the characteristics of hazardous waste.

(a) The Administrator shall identify and define a characteristic of hazardous waste in Subpart C only upon determining that:
  (1) A solid waste that exhibits the characteristics may:
    (i) Cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or
    (ii) Pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of or otherwise managed; and
  (2) The characteristic can be:
    (i) Measured by an available standardized test method which is reasonably within the capability of generators of solid waste or private sector laboratories that are available to serve generators of solid waste; or
    (ii) Reasonably detected by generators of solid waste through their knowledge of their waste.

261.11 Criteria for listing hazardous waste.

(a) The Administrator shall list a solid waste as a hazardous waste only upon determining that the solid waste meets one of the following criteria:
  (1) It exhibits any of the characteristics of hazardous waste identified in Subpart C.
  (2) It has been found to be fatal to humans in low doses or, in the absence of data on human toxicity, it has been shown in studies to have an oral LD 50 toxicity (rat) of less than 50 milligrams per kilogram, an inhalation LC 50 toxicity (rat) of less than 2 milligrams per liter, or a dermal LD 50 toxicity (rabbit) of less than 200 milligrams per kilogram or is otherwise capable of causing or significantly contributing to an increase in serious irreversible, or incapacitating reversible, illness. (Waste listed in accordance with these criteria will be designated Acute Hazardous Waste.)
  (3) It contains any of the toxic constituents listed in Appendix VIII and, after considering the following factors, the Administrator concludes that the waste is capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed.
    (i) The nature of the toxicity presented by the constituent.
    (ii) The concentration of the constituent in the waste.
    (iii) The potential of the constituent or any toxic degradation product of the constituent to migrate from the waste into the environment under the types of improper management considered in paragraph (a)(3)(vii) of this section.
    (iv) The persistence of the constituent or any toxic degradation product of the constituent.
    (v) The potential for the constituent or any toxic degradation product of the constituent to degrade into non-harmful constituents and the rate of degradation.
    (vi) The degree to which the constituent or any degradation product of the constituent bioaccumulates in ecosystems.
    (vii) The plausible types of improper management to which the waste could be subjected.
    (viii) The quantities of the waste generated at individual generation sites or on a regional or national basis.
    (ix) The nature and severity of the human health and environmental damage that has occurred as a result of the improper management of wastes containing the constituent.
    (x) Action taken by other governmental agencies or regulatory programs based on the health or environmental hazard posed by the waste or waste constituent.
    (xi) Such other factors as may be appropriate.

Substances will be listed on Appendix VIII only if they have been shown in scientific studies to have toxic, carcinogenic, mutagenic or teratogenic effects on humans or other life forms. (Wastes listed in accordance with these criteria will be designated Toxic wastes.)

(b) The Administrator may list classes or types of solid waste as hazardous waste if he has reason to believe that individual wastes, within the class or type of waste, typically or frequently are hazardous under the definition of hazardous waste found in Section 1004(5) of the Act.

(c) The Administrator will use the criteria for listing specified in this section to establish the exclusion limits referred to in Section 261.5(c).

(c) 40 CFR 261.20 through 261.24 (Subpart C), "Characteristics of Hazardous Waste" are incorporated by reference including subsequent amendments and editions.

SUBPART C - CHARACTERISTICS OF HAZARDOUS WASTE

261.20 General.

(a) A solid waste, as defined in Section 261.2, which is not excluded from regulation as a hazardous waste under Section 261.4(b), is a hazardous waste if it exhibits any of the characteristics identified in this subpart.

[Comment: Section 262.11 of this chapter sets forth the generator's responsibility to determine whether his waste exhibits one or more of the characteristics identified in this subpart.]

(b) A hazardous waste which is identified by a characteristic in this Subpart is assigned every EPA Hazardous Waste Number that is applicable as set forth in this Subpart. This number must be used in complying with the notification requirements of Section 3010 of the Act and all applicable recordkeeping and reporting requirements under Parts 262 through 265, 268, and 270 of this chapter.

(c) For purposes of this subpart, the Administrator will consider a sample obtained using any of the applicable sampling methods specified in Appendix I to be a representative sample within the meaning of Part 260 of this chapter.

[Comment: Since the Appendix I sampling methods are not being formally adopted by the Administrator, a person who desires to employ an alternative sampling method is not required to demonstrate the equivalency of his method under the procedures set forth in Sections 260.20 and 260.21.]

261.21 Characteristic of ignitability.

(a) A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:
   (1) It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume and has flash point less than 60°C (140°F), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D-93-79 or D-93-80 (incorporated by reference, see Section 260.11), or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D-3278-78 (incorporated by reference, see Section 260.11), or as determined by an equivalent test method approved by the Administrator under procedures set forth in Sections 260.20 and 260.21.
   (2) It is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.
   (3) It is an ignitable compressed gas as defined in 49 CFR 173.300 and as determined by the test methods described in that regulation or equivalent test methods approved by the Administrator under Sections 260.20 and 260.21.
   (4) It is an oxidizer as defined in 49 CFR 173.151.

(b) A solid waste that exhibits the characteristic of ignitability has the EPA Hazardous Waste Number of D001.

261.22 Characteristic of corrosivity.

(a) A solid waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:
   (1) It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using Method 9040 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW--846, as incorporated by reference in Section 260.11 of this chapter.
   (2) It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F) as determined by the test method specified in NACE (National Association of Corrosion Engineers) Standard TM-01-69 as standardized in "Test Methods for the Evaluating Solid

Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11) of this chapter.

(b) A solid waste that exhibits the characteristic of corrosivity has the EPA Hazardous Waste Number of D002.

261.23 Characteristic of reactivity.

(a) A solid waste that exhibits the characteristic of reactivity has the EPA Hazardous Waste Number D003:
  (1) It is normally unstable and readily undergoes violent change without detonating.
  (2) It reacts violently with water.
  (3) It forms potentially explosive mixtures with water.
  (4) When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.
  (5) It 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 in a quantity sufficient to present a danger to human health or the environment.
  (6) It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.
  (7) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.
  (8) It is a forbidden explosive as defined in 49 CFR 173.51, or a Class A explosive as defined in 49 CFR 173.53 or a Class B explosive as defined in 49 CFR 173.88.

(b) A solid waste that exhibits the characteristic of reactivity has the EPA Hazardous Waste Number of D003.

261.24 Toxicity Characteristic.

(a) A solid waste exhibits the characteristic of toxicity if, using the Toxicity Characteristic Leaching Procecure, test Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of this chapter, the extract from a representative sample of the waste contains any of the contaminants listed in table 1 at the concentration equal to or greater than the respective value given in that table. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering using the methodology outlined in Method 1311, is considered to be the extract for the purpose of this section.

(b) A solid waste that exhibits the characteristic of toxicity has the EPA Hazardous Waste Number specified in Table I which corresponds to the toxic contaminant causing it to be hazardous.

Table I - Maximum Concentration of Contaminants
for Toxicity Characteristic

EPA hazardous waste number[1]	Contaminant	CAS No[2]	Regulatory Level (mg/l.)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D019	Carbon Tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03
D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	6.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol	95-48-7	[4]200.0
D024	m-Cresol	108-39-4	[4]200.0
D025	p-Cresol	106-44-5	[4]200.0
D026	Cresol	.....	[4]200.0
D016	2,4-D	94-75-7	10.0
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-06-2	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4-Dinitrotoluene	121-14-2	[3]0.13
D012	Endrin	72-20-8	0.02
D031	Heptachlor (and its epoxide)	76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	[3]0.13
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D008	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	[3]5.0
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	2.0
D017	2,4,5-TP Silvex	93-72-1	1.0
D043	Vinyl chloride	75-01-4	0.2

[1]Hazardous waste number.

[2]Chemical abstracts service number.

[3]Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

[4]If o-, m-, and p-Cresol concentrations cannot be differentiated, the total cresol (D026) concentration is used. The regulatory level of total cresol is 200 mg/l.

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(d) 40 CFR 261.30 through 261.35 (Subpart D), "Lists of Hazardous Wastes" are incorporated by reference including subsequent amendments and editions.

SUBPART D - LISTS OF HAZARDOUS WASTES

261.30 General.

(a) A solid waste is a hazardous waste if it is listed in this Subpart, unless it has been excluded from this list under Sections 260.20 and 260.22.

(b) The Administrator will indicate his basis for listing the classes or types of wastes listed in this Subpart by employing one or more of the following Hazard Codes:

Ignitable Waste.....(I)
Corrosive Waste.....(C)
Reactive Waste.....(R)
Toxicity Characteristic Waste.....(E)
Acute Hazardous Waste.....(H)
Toxic Waste.....(T)

Appendix VII identifies the constituent which caused the Administrator to list the waste as a Toxicity Characteristic Waste (E) or Toxic Waste (T) in Sections 261.31 and 261.32.

(c) Each hazardous waste listed in this Subpart is assigned an EPA Hazardous Waste Number which precedes the name of the waste. This number must be used in complying with the notification requirements of Section 3010 of the Act and certain recordkeeping and reporting requirements under Parts 262 through 265 and Part 270 of this chapter.

(d) The following hazardous wastes listed in Section 261.31 or Section 261.32 are subject to the exclusion limits for acutely hazardous wastes established in Section 261.5: EPA Hazardous Wastes Nos. FO20, FO21, FO22, FO23, FO26, FO27.

261.31 Hazardous waste from non-specific sources.

(a) The following solid wastes are listed hazardous wastes from non-specific sources unless they are excluded under Sections 260.20 and 260.22 and listed in Appendix IX:

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
Generic		
F001.....	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and and spent solvent mixtures.	(T)
F002.....	The following spent halogenated solvents: tetrachloroethylene, methylene chloride, trichloroethylene. 1, 1, 1-trichloroethane chlorobenzen. 1, 1, 2-trichloro-1, 2, 2-trifluoroethane, orthodichiorobenzene, trichlorofluoromethane, and 1, 1, 2-trichloroethane; all spent solvent mixtures/blends containing before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents	(T)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
Generic		
	or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	
F003.....	The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I)
F004.....	The following spent non-halogenated solvents: cresols and cresylic acid, and nitrobenzene; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and the still bottoms from the recovery of these solvents.	(T)
F005.....	The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F004; and the still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(I, T)
F006.....	Wastewater treatment sludges from electroplating except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum orzinc-aluminum plating on carbon steel; (5) cleaning/ stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.	(T)
F007.....	Spent cyanide plating bath solutions from electroplating operations	(R, T)
F008.....	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process	(R, T)
F009.....	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.	(R, T)
F010.....	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.	(R, T)
F011.....	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.	(R, T)
F012.....	Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.	(T)
F019.....	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process.	(T)
F020.....	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate or component in a formulating process) of tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives. (This listing does not include wastes from the production of Hexachlorophene from highly purified 2,4,5- trichlorophenol.	(H)
F021.....	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of pentachlorophenol, or of intermediates used to produce its derivatives.	(H)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
Generic		
F022.....	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzenes under alkaline conditions.	(H)
F023.....	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tri- and tetrachlorophenols. (This listing does not include wastes from equipment used only for the production or use of hexachlorophene from highly purified 2,3,5-trichlorophenol).	(H)
FO24.....	Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (This listing does not include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in Section 261.31 or Section 261.32).	(T)
F025.....	Condensed light ends, spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	(T)
F026.....	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production of materials on equipment previously used for the manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of tetra-, penta-, or hexachlorobenzene under alkaline conditions.	(H)
F027.....	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing Hexachlorobenzene synthesized from prepurified 2,4,5-trichlorophenol as the sole component).	(H)
F028.....	Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027.	(T)
F032.....	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with Section 261.35 of this chapter or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
F034.....	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote	(T)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
Generic	formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	
F035.....	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
F037.....	Petroleum refinery primary oil/water/solids separation sludge--Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in: oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in Section 261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing.	(T)
F038.....	Petroleum refinery secondary (emulsified) oil/water/solids separation sludge --Any sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air flotation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in Section 261.31(b)(2) (including sludges and floats generated in aggressive additional units after wastewaters have been treated in aggressive biological treatment units) and F037; K048, and K051 wastes are not included in this listing.	(T)
F039.....	Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under Subpart D of this Part. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028).	(T)

* (I,T) should be used to specify mixtures containing ignitable and toxic constituents.

(b) Listing Specific Definitions:

(1) For the purposes of the F037 and F038 listings, oil/water/solids is defined as oil and/or water and/or solids.

(2) (i) For the purposes of the F037 and F038 listings, aggressive biological treatment units are defined as units which employ one of the following four treatment methods: activated sludge; trickling filter, rotating biological contactor for the continuous accelerated biological oxidation of wastewaters; or high-rate aeration. High-rate aeration is a system of surface impoundments or tanks, in which intense mechanical aeration is used to completely mix the wastes, enhance biological activity, and (A) the units employ a minimum of 6 hp per million gallons of treatment volume; and either (B) the hydraulic retention time of the unit is no longer than 5 days; or (C) the hydraulic retention time is no longer than 30 days and the unit does not generate a sludge that is a hazardous waste by the Toxicity Characteristic.

(ii) Generators and treatment, storage and disposal facilities have the burden of proving that their sludges are exempt from listing as F037 and F038 wastes under this definition. Generators and treatment, storage and disposal facilities must maintain, in their operating or other onsite records, documents and data sufficient to prove that: (A) the unit is an aggressive biological treatment unit as defined in this subsection; and (B) the sludges sought to be exempted from the definitions of F037 and/or F038 were actually generated in the aggressive biological treatment unit:

(3) (i) For the purpose of the F037 listing, sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement.

(ii) For the purposes of the F038 listing, (A) sludges are considered to be generated at the moment of deposition in the unit, where deposition is defined as at least a temporary cessation of lateral particle movement and (B) floats are considered to be generated at the moment they are formed in the top of the unit.

261.32 Hazardous waste from specific sources.

The following solid wastes are listed hazardous wastes from specific sources unless they are excluded under Sections 260.20 and 260.22 and listed in Appendix IX.

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
Wood Preservation:		
K001.....	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.	(T)
Inorganic Pigments:		
K002.....	Wastewater treatment sludge from the production of chrome yellow and orange pigments	(T)
K003.....	Wastewater treatment sludge from the production of molybdate orange pigments	(T)
K004.....	Wastewater treatment sludge from the production of zinc yellow pigments	(T)
K005.....	Wastewater treatment sludge from the production of chrome green pigments	(T)
K006.....	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated)	(T)
K007.....	Wastewater treatment sludge from the production of iron blue pigments	(T)
K008.....	Oven residue from the production of chrome oxide green pigments	(T)
Organic Chemicals:		
K009.....	Distillation bottoms from the production of acetaldehyde from ethylene	(T)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
K010.....	Distillation side cuts from the production of acetaldehyde from ethylene	(T)
K011.....	Bottom stream from the wastewater stripper in the production of acrylonitrile	(R,T)
K013.....	Bottom stream from the acetonitrile column in the production of acrylonitrile	(R,T)
K014.....	Bottoms from the acetonitrile purification column in the production of acrylonitrile	(T)
K015.....	Still bottoms from the distillation of benzyl chloride	(T)
K016.....	Heavy ends or distillation residues from the production of carbon tetrachloride	(T)
K017.....	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin	(T)
K018.....	Heavy ends from the fractionation column in ethyl chloride production	(T)
K019.....	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production	(T)
K020.....	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production	(T)
K021.....	Aqueous spent antimony catalyst waste from fluoromethanes production	(T)
K022.....	Distillation bottom tars from the production of phenol/acetone from cumene	(T)
K023.....	Distillation light ends from the production of phthalic anhydride from naphthalene	(T)
K024.....	Distillation bottoms from the production of phthalic anhydride from naphthalene	(T)
K025.....	Distillation bottoms from the production of nitrobenzene by the nitration of benzene	(T)
K026.....	Stripping still tails from the production of methylethyl pyridines	(T)
K027.....	Centrifuge and distillation residues from toluene diisocyanate production	(R, T)
K028.....	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane	(T)
K029.....	Waste from the product steam stripper in the production of 1,1,1-trichloroethane	(T)
K030.....	Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene	(T)
K083.....	Distillation bottoms from aniline production	(T)
K085.....	Distillation or fractionation column bottoms from the production of chlorobenzenes	(T)
K093.....	Distillation light ends from the production of phthalic anhydride orthoxylene	(T)
K094.....	Distillation bottoms from the production of phthalic anhydride from orthoxylene	(T)
K095.....	Distillation bottoms from the production of 1,1,1-trichloroethane	(T)
K096.....	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane	(T)
K103.....	Process residues from aniline extraction from the production of aniline	(T)
K104.....	Combined wastewater streams generated from nitrobenzene/aniline	(T)
K105.....	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes	(T)
K107.....	Column bottoms from product separation from the production of 1,1-dimethyl-hydrazine (UDMH) from carboxylic acid hydrazines	(C, T)
K108.....	Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	(I, T)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
K109	Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carbolylic acid	(T)
K110.....	Condensed column overheads from Intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides	(T)
K111.....	Product wastewaters from the production of dinitrotoluene via nitration of toluene	(C, T)
K112.....	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene	(T)
K113.....	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K114.....	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene	(T)
K115.....	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	(T)
K116.....	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine	(T)
K117.....	Waste water from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.	(T)
K118.....	Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene	(T)
K136.....	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	(T)
K149.....	Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups, (The waste does not include still bottoms from the distillation of benzyl chloride.).	(T)
K150.....	Organic residuals, excluding spent carbon adsorbent from the spent chlorine gas and hydrochloric add recovery processes associated with the production of alpha-(or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	(T)
K151.....	Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzyl chlorides, and compounds with mixtures of these functional groups.	(T)
K156.....	Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes.	(T)
K157.....	Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes.	(T)
K158.....	Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes	(T)
K159.....	Organics from the treatment of thiocarbamate wastes	(T)
K160.....	Solids (including filter wastes, separation solids, and spent catalysts) from the production of thiocarbamates and solids from the treatment of thiocarbamate wastes.	
K161.....	Purification solids (including filtration, evaporation, and centrifugation solids), bag house dust and floor sweepings from the production of dithiocarbamate acids and their salts. (This listing does not include K125 or K126)	(R, T)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
Inorganic Chemicals:		
K071.....	Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used	(T)
K073.....	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production	(T)
K106.....	Wastewater treatment sludge from the mercury cell process in chlorine production	(T)
Pesticides:		
K031.....	By-product salts generated in the production of MSMA and cacodylic acid	(T)
K032.....	Wastewater treatment sludge from the production of chlordane	(T)
K033.....	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane	(T)
K034.....	Filter solids from the filtration of hexachloro-cyclopentadiene in the production of chlordane	(T)
K097.....	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane	(T)
K035.....	Wastewater treatment sludges generated in the production of creosote	(T)
K036.....	Still bottoms from toluene reclamation distillation in the production of disulfoton	(T)
K037.....	Wastewater treatment sludges from the production of disulfoton	(T)
K038.....	Wastewater from the washing and stripping of phorate production	(T)
K039.....	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate	(T)
K040.....	Wastewater treatment sludge from the production of phorate	(T)
K041.....	Wastewater treatment sludge from the production of toxaphene	(T)
K098.....	Untreated process wastewater from the production of toxaphene	(T)
K042.....	Heavy ends or distillation residues from the distillation of tetra-chlorobenzene in the production of 2,4,5-T	(T)
K043.....	2,6-Dichlorophenol waste from the production of 2,4-D	(T)
K099.....	Untreated wastewater from the production of 2,4-D	(T)
K123.....	Process wastewater (including supemates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salt	(T)
K124.....	Reactor vent scrubber water from the production of ethylenebis-dithiocarbamic acid and its salts	(C,T)
K125.....	Filtration, evaporation and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts	(T)
K126.....	Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts	(T)
K131.....	Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide.	(C,T)
K132.....	Spent absorbent and wastewater separator solids from the production of methyl bromide.	(T)
Explosives:		
K044.....	Wastewater treatment sludges from the manufacturing and processing of explosives	(R)
K045.....	Spent carbon from the treatment of wastewater containing explosives	(R)
K046.....	Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds	(T)
K047.....	Pink/red water from TNT operations	(R)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
Petroleum Refining:		
K048.....	Dissolved air flotation (DAF) float from the petroleum refining industry	(T)
K049.....	Slop oil emulsion solids from the petroleum refining industry	(T)
K050.....	Heat exchanger bundle cleaning sludge from the petroleum refining industry	(T)
K051.....	API separator sludge from the petroleum refining refining industry	(T)
K052.....	Tank bottoms (leaded) from the petroleum refining industry	(T)
Iron and Steel:		
K061.....	Emission control dust/sludge from the primary production of steel in electric furnaces	(T)
K062.....	Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332).	(C, T)
Primary copper:		
K064	Acid plant blowdown slurry/ sludge resulting from the thickening of blowdown slurry from primary copper production.	(T)
Primary lead:		
K065	Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities.	(T)
Primary zinc:		
K066	Sludge from treatment of process wastewater and/or acid plant blowdown from primary zinc production.	(T)
Primary aluminum		
K088	Spent potliners from primary aluminum reduction.	(T)
Ferroalloys:		
K090	Emission control dust or sludge from ferrochromium-silicon production.	(T)
K091	Emission control dust or sludge from ferrochromium production.	(T)
Secondary Lead:		
K069.....	Emission control dust/sludge from secondary lead smelting (Note: This listing is stayed administratively for sludge generated from secondary acid scrubber systems. The stay will remain in effect until further administrative action is taken. If EPA takes further action effecting this stay. EPA will publish a notice of the action in the Federal Register.	(T)
K100.....	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting	(T)
Veterinary Pharmaceuticals:		
K084.....	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	(T)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard Code
K101.....	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	(T)
K102.....	Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds	(T)
Ink Formulation:		
K086.....	Solvent washes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead	(T)
Coking:		
K060.....	Ammonia still lime sludge from coking operations	(T)
K087.....	Decanter tank tar sludge from coking operations	(T)
K141.....	Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke from coal or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludges from coking operations).	(T)
K142.....	Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal.	(T)
K143.....	Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal.	(T)
K144.....	Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal.	(T)
K145.....	Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.	(T)
K147.....	Tar storage tank residues from coal tar refining	(T)
K148.....	Residues from coal tar distillation, including but not limited to, still bottoms.	(T)

261.33 Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof.

The following materials or items are hazardous wastes if and when they are discarded or intended to be discarded, as described in Section 261.2(a)(2)(i), when they are mixed with waste oil or used oil or other material and applied to the land for dust suppression or road treatment, when they are otherwise applied to the land in lieu of their original intended use or when they are contained in products that are applied to the land in lieu of their original intended use, or

when, in lieu of their original intended use, they are produced for use as (or as a component of) a fuel, distributed for use as a fuel, or burned as a fuel.

(a) Any commercial chemical product, or manufacturing chemical intermediate having the generic name listed in paragraphs (e) or (f) of this section.

(b) Any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraphs (e) or (f) of this section.

(c) Any residue remaining in a container or in an inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraphs (e) or (f) of this section, unless the container is empty as defined in Section 261.7(b) of this chapter.

[**Comment**: Unless the residue is being beneficially used or reused, or legitimately recycled or reclaimed; or being accumulated, stored, transported or treated prior to such use, reuse, recycling or reclamation, EPA considers the residue to be intended for discard, and thus a hazardous waste. An example of a legitimate re-use of the residue would be where the residue remains in the container and the container is used to hold the same commercial chemical product or manufacturing chemical intermediate it previously held. An example of the discard of the residue would be where the drum is sent to a drum reconditioner who reconditions the drum but discards the residue.]

(d) Any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any commerical chemical product or manufacturing chemical intermediate having the generic name listed in paragraphs (e) or (f) of this Section, or any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill into or on any land or water, of any off-specification chemical product and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (e) or (f) of this section.

[**Comment**: The phrase "commercial chemical product or manufacturing chemical intermediate having the generic name listed in ..." refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substances listed in paragraphs (e) or (f). Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in paragraphs (e) or (f), such waste will be listed in either Sections 261.31 or 261.32 or will be identified as a hazardous waste by the characteristics set forth in Subpart C of this part.]

(e) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products or manufacturing chemical intermediates referred to in paragraphs (a) through (d) of this section, are identified as acute hazardous wastes (H) and are subject to be the small quantity exclusion defined in Section 261.5(e).

[**Comment**: For the convenience of the regulated community the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), and R (Reactivity). Absence of a letter indicates that the compound only is listed for acute toxicity.]

These wastes and their corresponding EPA Hazardous Waste Numbers are:

Hazardous Waste No.	Chemical Abstracts No.	Substance
P023	107-20-0	Acetaldehyde, chloro-
P002	591-08-2	Acetamide, N-(aminothioxomethyl)-
P057	640-19-7	Acetamide, 2-fluoro-
P058	62-74-8	Acetic acid, fluoro-, sodium salt
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein
P070	116-06-3	Aldicarb

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
P203	1646-88-4	Aldicarb sulfone
P004	309-00-2	Aldrin
P005	107-18-6	Allyl alcohol
P006	20859-73-8	Aluminum phosphide(R,T)
P007	2763-96-4	5-(Aminomethyl)-3-isoxazolol
P008	504-24-5	4-Aminopyridine
P009	131-74-8	Ammonium picrate (R)
P119	7803-55-6	Ammonium vanadate
P099	506-61-6	Argentate(1-),bis(cyano-C)-, potassium
P010	7778-39-4	Arsenic acid H_3AsO_4
P012	1327-53-3	Arsenic oxide As_2O_3
P011	1303-28-2	Arsenic oxide As_2O_5
P011	1303-28-2	Arsenic pentoxide
P012	1327-53-3	Arsenic trioxide
P038	692-42-2	Arsine, diethyl-
P036	696-28-6	Arsonous dichloride, phenyl-
PO54	151-56-4	Aziridine
PO67	75-55-8	Aziridine, 2-methyl-
P013	542-62-1	Barium cyanide
P024	106-47-8	Benzenamine, 4-chloro-
P077	100-01-6	Benzenamine, 4-nitro-
P028	100-44-7	Benzene, (chloromethyl)-
P042	51-43-4	1,2-Benzenediol,4-[1-hydroxy-2-(methylamino) ethyl]-,(R)-
P046	122-09-8	Benzeneethanamine, alpha,alpha-dimethyl-
P014	108-98-5	Benzenethiol
P127	1563-66-2	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate
P188	57-64-7	Benzoic acid, 2-hydroxy-, compd. with (3aS-cis) -1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrolo [2,3-b]indol-5-yl methylcarbamate ester (1:1).
P001	[1]81-81-2	2H-1-Benzopyran-2-one,4-hydroxy-3-(3-oxo-1-phenylbutyl)-,& salts, when present at concentrations greater than 0.3%
P028	100-44-7	Benzyl chloride
P015	7440-41-7	Beryllium powder
P017	598-31-2	Bromoacetone
P018	357-57-3	Brucine
P045	39196-18-4	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[methylamino)carbonyl] oxime
P021	592-01-8	Calcium cyanide
P021	592-01-8	Calcium cyanide $Ca(CN)_2$
P189	55285-14-8	Carbamic acid, [(dibutylamino)-thio]methyl-, 2,3-dihydro-2,2-dimethyl- 7-benzofuranyl ester
P191	644-64-4	Carbamic acid, dimethyl-, 1-[(dimethyl-amino) carbonyl]-5-methyl-1H- pyrazol-3-yl ester
P192	119-38-0	Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H- pyrazol-5-yl ester
P190	1129-41-5	Carbamic acid, methyl-, 3-methylphenyl ester
P127	1563-66-2	Carbofuran

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
P022	75-15-0	Carbon disulfide
P095	75-44-5	Carbonic dichloride
P189	55285-14-8	Carbosulfan
P023	107-20-0	Chloroacetaldehyde
P024	106-47-8	p-Chloroaniline
P026	5344-82-1	1-(o-Chlorophenyl)thiourea
P027	542-76-7	3-Chloropropionitrile
P029	544-92-3	Copper cyanide
P029	544-92-3	Copper cyanide Cu(CN)
P202	64-00-6	m-Cumenyl methylcarbamate
P030	.....	Cyanides(soluble cyanide salts), not otherwise specified
P031	460-19-5	Cyanogen
P033	506-77-4	Cyanogen chloride
P033	506-77-4	Cyanogen chloride(CN)Cl
P034	131-89-5	2-Cyclohexyl-4,6-dinitrophenol
P016	542-88-1	Dichloromethyl ether
P036	696-28-6	Dichlorophenylarsine
P037	60-57-1	Dieldrin
P038	692-42-2	Diethylarsine
P041	311-45-5	Diethyl-p-nitrophenyl phosphate
P040	297-97-2	O,O-Diethyl O-pyrazinyl phosphorothioate
P043	55-91-4	Diisopropylfluorophosphate (DFP)
PO04	309-00-2	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexa-chloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta, 5alpha,8alpha,8abeta)-
PO60	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10-10-hexa-chloro-1,4,4a,5;8,8a-hexahydro-,(1alpha,4alpha,4abeta, 5beta,8beta,8abeta)-
PO37	60-57-1	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha, 2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)-
PO51	[1]72-20-8	2,7:3,6-Dimethanonaphth[2,3b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha, 2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-, & metabolites
P044	60-51-5	Dimethoate
PO46	122-09-8	alpha,alpha-Dimethylphenethylamine
P191	644-64-4	Dimetilan
P047	[1]534-52-1	4,6-Dinitro-o-cresol and salts
P048	51-28-5	2,4-Dinitrophenol
P020	88-85-7	Dinoseb
P085	152-16-9	Diphosphoramide, octamethyl-
P111	107-49-3	Diphosphoric acid, tetraethyl ester
P039	298-04-4	Disulfoton
P049	541-53-7	Dithiobiuret
P185	26419-73-8	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O- [(methylamino)- carbonyl]oxime
P050	115-29-7	Endosulfan
P088	145-73-3	Endothall
P051	72-20-8	Endrin
P051	72-20-8	Endrin & metabolites
P042	51-43-4	Epinephrine

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
P031	460-19-5	Ethanedinitrile
P194	23135-22-0	Ethanimidothioc acid, 2-(dimethylamino)-N-[[(methylamino) carbonyl]oxy]-2-oxo-, methyl ester
P066	16752-77-5	Ethanimidothioic acid, N[[(methylamino)carbonyl]oxy]-, methyl ester
P101	107-12-0	Ethyl cyanide
P054	151-56-4	Ethyleneimine
P097	52-85-7	Famphur
P056	7782-41-4	Fluorine
P057	640-19-7	Fluoroacetamide
P058	62-74-8	Fluoroacetic acid, sodium salt
P065	628-86-4	Fluminic acid, mercury(2+) salt (R,T)
P198	23422-53-9	Formetanate hydrochloride
P197	17702-57-7	Formparanate
P059	76-44-8	Heptachlor
P062	757-58-4	Hexaethyltetraphosphate
P116	79-19-6	Hydrazinecarbothioamide
P068	60-34-4	Hydrazine, methyl-
P063	74-90-8	Hydrocyanic acid
P063	74-90-8	Hydrogen cyanide
P096	7803-51-2	Hydrogen phosphide
P060	465-73-6	Isodrin
P192	119-38-0	Isolan
P202	64-00-6	3-Isopropylphenyl N-methylcarbamate
P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-
P196	15339-36-3	Manganese, bis(dimethylcarbamodithioato-S,S')-,
P196	15339-36-3	Manganese dimethyldithiocarbamate
P092	62-38-4	Mercury, (acetato-O)phenyl-
P065	628-86-4	Mercury fulminate (R,T)
P082	62-75-9	Methanamine, N-methyl-N-nitroso-
P064	624-83-9	Methane, isocyanato-
P016	542-88-1	Methane, oxybis[chloro-
P112	509-14-8	Methane, tetranitro- (R)
P118	75-70-7	Methanethiol, trichloro-
P198	23422-53-9	Methanimidamide, N,N-dimethyl-N'-[3-[l(methylamino)-carbonyl]oxy]phenyl]-,monohydrochloride
P197	17702-57-7	Methanimidamide, N,N-dimethyl-N'-[2-(methyl-4-[l (methylamino)carbonyl)oxy]phenyl]-carbonyl]oxy]phenyl]-
P050	115-29-7	6,9-Methano-2,4,3-benzodioxathiepin,6,7,8,9,10,10-,5a,6,9,9a-hexahydro-,3-oxide
P059	76-44-8	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a, 4,7,7a-tetrahydro-
P199	2032-65-7	Methiocarb
P066	16752-77-5	Methomyl
P068	60-34-4	Methyl hydrazine
P064	624-83-9	Methyl isocyanate
P069	75-86-5	2-Methyllactonitrile
P071	298-00-0	Methyl parathion
P190	1129-41-5	Metolcarb
P128	315-18-4	Mexacarbate

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
P072	86-88-4	alpha-Naphthylthiourea
P073	13463-39-3	Nickel carbonyl
P073	13463-39-3	Nickel carbonyl, $Ni(CO)_4$(T-4)-
P074	557-19-7	Nickel cyanide
P074	557-19-7	Nickel cyanide, $Ni(CN)_2$
P075	[1]54-11-5	Nicotine and salts
P076	10102-43-9	Nitric oxide
P077	100-01-6	p-Nitroaniline
P078	10102-44-0	Nitrogen dioxide
P076	10102-43-9	Nitrogen oxide NO
P078	10102-44-0	Nitrogen oxide NO_2
P081	55-63-0	Nitroglycerine (R)
P082	62-75-9	N-Nitrosodimethylamine
P084	4549-40-0	N-Nitrosomethylvinylamine
P085	152-16-9	Octamethylpyrophosphoramide
P087	20816-12-0	Osmium oxide OsO_4,(T-4)-
P087	20816-12-0	Osmium tetroxide
P088	145-73-3	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
P194	23135-22-0	Oxamyl
P089	56-38-2	Parathion
P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-
P128	315-18-4	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)
P199	2032-65-7	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate
P048	51-28-5	Phenol, 2,4-dinitro-
P047	[1]534-52-1	Phenol, 2-methyl-4,6-dinitro-, and salts
P202	64-00-6	Phenol, 3-(1-methylethyl)-, methyl carbamate
P201	2631-37-0	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate
P020	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-
P009	131-74-8	Phenol, 2,4,6-trinitro-, ammonium salt (R)
P092	62-38-4	Phenylmercury acetate
P093	103-85-5	Phenylthiourea
P094	298-02-2	Phorate
P095	75-44-5	Phosgene
P096	7803-51-2	Phosphine
P041	311-45-5	Phosphoric acid, diethyl 4-nitrophenyl ester
P039	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio) ethyl] ester
P094	298-02-2	Phosphorodithioic acid, O,O-diethyl,S-[(ethylthio) methyl] ester
P044	60-51-5	Phosphorodithioic acid, O,O-dimethyl S[2-(methylamino)-2-oxoethyl]ester
P043	55-91-4	Phosphorofluoric acid bis(1-methylethyl)-ester
P089	56-38-2	Phosphorothioic acid,O,O-diethyl O-(4-nitrophenyl)ester
P040	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P097	52-85-7	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl) phenyl] O,O-dimethyl ester
P071	298-00-0	Phosphorothioic acid,O,O-dimethyl O-(4-nitrophenyl)ester
P204	57-47-6	Physostigmine
P188	57-64-7	Physostigmine salicylate
P110	78-00-2	Plumbane, tetraethyl-

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
P098	151-50-8	Potassium cyanide
P098	151-50-8	Potassium cyanide K(CN)
P099	506-61-6	Potassium silver cyanide
P201	2631-37-0	Promecarb
P203	1646-88-4	Propanal, 2-methyl-2-(methyl-sulfonyl)-,O-[(methylamino) carbonyl)oxime
P070	116-06-3	Propanal, 2-methyl-2-(methylthio)-,O-[(methylamino) carbonyl]oxime
P101	107-12-0	Propanenitrile
P027	542-76-7	Propanenitrile, 3-chloro-
P069	75-86-5	Propanenitrile, 2-hydroxy-2-methyl-
P081	55-63-0	1,2,3-Propanetriol, trinitrate (R)
P017	598-31-2	2-Propanone, 1-bromo-
P102	107-19-7	Propargyl alcohol
P003	107-02-8	2-Propenal
P005	107-18-6	2-Propen-1-ol
P067	75-55-8	1,2-Propylenimine
P102	107-19-7	2-Propyn-1-ol
P008	504-24-5	4-Pyridinamine
P075	[1]54-11-5	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-, (S), & salts
P204	57-47-6	Pyrrolo (2,3-b]indol-5-0l, 1,2,3,3a,8,8a-hexahydro-1,3a, 8-trimethyl-, methylcarbamate (ester), (3aS-cis)-.
P114	12039-52-0	Selenious acid, dithalium(1+) salt
P103	630-10-4	Selenourea
P104	506-64-9	Silver cyanide
P104	506-64-9	Silver cyanide Ag(CN)
P105	26628-22-8	Sodium azide
P106	143-33-9	Sodium cyanide
P106	143-33-9	Sodium cyanide Na(CN)
P108	[1]57-24-9	Strychnidin-10-one, and salts
P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-
P108	[1]57-24-9	Strychnine and salts
P115	7446-18-6	Sulfuric acid, dithallium(1+) salt
P109	3689-24-5	Tetraethyldithiopyrophosphate
P110	78-00-2	Tetraethyl lead
P111	107-49-3	Tetraethyl pyrophosphate
P112	509-14-8	Tetranitromethane (R)
P062	757-58-4	Tetraphosphoric acid, hexaethyl ester
P113	1314-32-5	Thallic oxide
P113	1314-32-5	Thallium oxide Tl_2O_3
P114	12039-52-0	Thallium(I) selenite
P115	7446-18-6	Thallium(I) sulfate
P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester
P045	39196-18-4	Thiofanox
P049	541-53-7	Thioimidodicarbonic diamide $[(H_2N)C(S)]_2NH$
P014	108-98-5	Thiophenol
P116	79-19-6	Thiosemicarbazide
P026	5344-82-1	Thiourea, (2-chlorophenyl)-
P072	86-88-4	Thiourea, 1-naphthalenyl-
P093	103-85-5	Thiourea, phenyl-
P185	26419-73-8	Tirpate

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
P123	8001-35-2	Toxaphene
P118	75-70-7	Trichloromethanethiol
P119	7803-55-6	Vanadic acid, ammonium salt
P120	1314-62-1	Vanadium oxide V_2O_5
P120	314-62-1	Vanadium pentoxide
P084	4549-40-0	Vinylamine, N-methyl-N-nitroso-.
P001	[1]81-81-2	Warfarin & salts, when present at concentrations greater than 0.3%
P121	557-21-1	Zinc cyanide
P121	557-21-1	Zinc cyanide $Zn(CN)_2$
P205	137-30-4	Zinc, bis(dimethylcarbamodithioato-S,S')-
P122	1314-84-7	Zinc phosphide Zn_3P_2, when present at concentrations greater than 10% (R,T)
P205	137-30-4	Ziram

[1]CAS Number given for parent compound only.

(f) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products referred to in paragraphs (a) through (d) of this section, are identified as toxic wastes [T], unless otherwise designated and are subject to the small quantity generator exclusion defined in Section 261.5(a) and (g).
[**Comment**: For the convenience of the regulated community, the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), R (Reactivity), I (Ignitability) and C (Corrosivity). Absence of a letter indicates that the compound is only listed for toxicity.]

These wastes and their corresponding EPA Hazardous Waste Numbers are:

Hazardous Waste No.	Chemical Abstracts No.	Substance
U394	30558-43-1	A2213
U001	75-07-0	Acetaldehyde (I)
U034	75-87-6	Acetaldehyde, trichloro-
U187	62-44-2	Acetamide, N-(4-ethoxyphenyl)-
U005	53-96-3	Acetamide, N-9H-fluoren-2-yl
U240	[1]94-75-7	Acetic acid, (2,4-dichlorophenoxy), salts & esters
U112	141-78-6	Acetic acid, ethyl ester (I)
U144	301-04-2	Acetic acid, lead(2+) salt
U214	563-68-8	Acetic acid, thallium (1+) salt
See F027	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-
U002	67-64-1	Acetone (I)
U003	75-05-8	Acetonitrile (I,T)
U004	98-86-2	Acetophenone
U005	53-96-3	2-Acetylaminofluorene
U006	75-36-5	Acetyl chloride (C,R,T)
U007	79-06-1	Acrylamide

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U008	79-10-7	Acrylic acid (I)
U009	107-13-1	Acrylonitrile
U011	61-82-5	Amitrole
U012	62-53-3	Aniline (I,T)
U136	70-60-5	Arsinic acid, dimethyl-
U014	492-80-8	Auramine
U015	115-02-6	Azaserine
U365	2212-67-1	H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester
U010	50-07-7	Azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, 6-amino-8-[[(aminocarbonyl)oxy]methyl]-1,1a,2,8, 8a,8b-hexahydro-8a-methoxy-5-methyl- [1aS-(1aalpha, 8beta,8aalpha,8balpha)]-
U280	101-27-9	Barban
U278	22781-23-3	Bendiocarb
U364	22961-82-6	Bendiocarb phenol
U271	17804-35-2	Benomyl
U157	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-
U016	225-51-4	Benz[c]acridine
U017	98-87-3	Benzal chloride
U192	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-
U018	56-55-3	Benz[a]anthracene
U094	57-97-6	Benz[a]anthracene, 7,12-dimethyl-
U012	62-53-3	Benzenamine (I,T)
U014	492-80-8	Benzenamine, 4,4'-carbonimidoylbis(N,N-dimethyl-
U049	3165-93-3	Benzenamine, 4-chloro-2-methyl-,hydrochloride
U093	60-11-7	Benzenamine, N-N'-dimethyl-4-phenylazo-
U328	95-53-4	Benzenamine, 2-methyl-
U353	106-49-0	Benzenamine, 4-methyl-
U158	101-14-4	Benzenamine, 4,4'-methylenebis[2-chloro-
U222	636-21-5	Benzenamine, 2-methyl-, hydrochloride
U181	99-55-8	Benzenamine, 2-methyl-5-nitro-
U019	71-43-2	Benzene (I,T)
U038	510-15-6	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)- alpha-hydroxy, ethyl ester
U030	101-55-3	Benzene, 1-bromo-4-phenoxy-
U035	305-03-3	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino]-
U037	108-90-7	Benzene, chloro-
U221	25376-45-8	Benzenenediamine, ar-methyl-
U028	117-81-7	1,2-Benzenedicarboxylic acid, [bis(2-ethylhexy)] ester
U069	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester
U088	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester
U102	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester
U107	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester
U070	95-50-1	Benzene, 1,2-dichloro-
U071	541-73-1	Benzene, 1,3-dichloro-
U072	106-46-7	Benzene, 1,4-dichloro-
U060	72-54-8	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-
U017	98-87-3	Benzene, (dichloromethyl)-
U223	26471-62-5	Benzene, 1,3-diisocyanatomethyl- (R,T)
U239	1330-20-7	Benzene, dimethyl-(I,T)
U201	108-46-3	1,3-Benzenediol
U127	118-74-1	Benzene, hexachloro-
U056	110-82-7	Benzene, hexahydro- (I)

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U220	108-88-3	Benzene, methyl-
U105	121-14-2	Benzene, 1-methyl-2,4-dinitro-
U106	606-20-2	Benzene, 2-methyl-1,3-dinitro-
U055	98-82-8	Benzene, (1-methylethyl)- (I)
U169	98-95-3	Benzene, nitro-
U183	608-93-5	Benzene, pentachloro-
U185	82-68-8	Benzene, pentachloronitro-
U020	98-09-9	Benzenesulfonic acid chloride (C,R)
U020	98-09-9	Benzenesulfonyl chloride (C,R)
U207	95-94-3	Benzene, 1,2,4,5-tetrachloro-
U061	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-
U247	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-methoxy-
U023	98-07-7	Benzene, (trichloromethyl)-
U234	99-35-4	Benzene, 1,3,5-trinitro-
U021	92-87-5	Benzidine
U202	[1]81-07-2	1,2-Benzisothiazol-3-(2H)-one, 1,1-dioxide and salts
U278	22781-23-3	1,3-Benzodioxol-4-ol, 2,2-dimethyl-, methyl carbamate
U364	22961-82-6	1,3-Benzodioxol-4-ol, 2,2-dimethyl-,
U367	1563-38-8	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl
U203	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-
U141	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-
U090	94-58-6	1,3-Benzodioxole, 5-propyl-
U064	189-55-9	Benzo[rst]pentaphene
U248	[1]81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3(3-oxo-1-phenylbutyl)- & salts, when present at concentrations of 0.3% or less
U022	50-32-8	Benzo[a]pyrene
U197	106-51-4	p-Benzoquinone
U023	98-07-7	Benzotrichloride (C,R,T)
U085	1464-53-5	2,2'-Bioxirane
U021	92-87-5	(1,1'-Biphenyl)-4,4'diamine
U073	91-94-1	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dichloro-
U091	119-90-4	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy-
U095	119-93-7	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl-
U401	97-74-5	Bis(dimethylthiocarbamoyl) sulfide
U400	120-54-7	Bis(pentamethylene)thiuram tetrasulfide
U225	75-25-2	Bromoform
U030	101-55-3	4-Bromophenyl phenyl ether
U128	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
U172	924-16-3	1-Butanamine, N-butyl-N-nitroso-
U031	71-36-3	1-Butanol (I)
U159	78-93-3	2-Butanone (I,T)
U160	1338-23-4	2-Butanone peroxide (R,T)
U053	4170-30-3	2-Butenal
U074	764-41-0	2-Butene, 1,4-dichloro- (I,T)
U143	303-34-4	2-Butenoic acid, 2-methyl-, 7-[(2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy)methyl]-2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*), 7aalpha]]-
U031	71-36-3	n-Butyl alcohol (I)
U392	2008-41-5	Butylate
U136	75-60-5	Cacodylic acid

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U032	13765-19-0	Calcium chromate
U372	10605-21-7	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester
U271	17804-35-2	Carbamic acid, [1-[(butylamino)carbonyl]-1H-benzimidazol-2-yl]-, methyl ester
U375	55406-53-6	Carbamic acid, butyl-, 3-iodo-2-propynyl ester
U280	101-27-9	Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butynyl ester
U238	59-79-6	Carbamic acid, ethyl ester
U178	615-53-2	Carbamic acid, methylnitroso-, ethyl ester
U373	122-42-9	Carbamic acid, phenyl-, 1-methylethyl ester
U409	23564-05-8	Carbamic acid, [1,2-phenylenebis (iminocarbonothioyl)] bis-, dimethyl ester
U097	79-44-7	Carbamic chloride, dimethyl-
U379	136-30-1	Carbamodithioic acid, dibutyl, sodium salt
U277	95-06-7	Carbamodithioic acid, diethyl-, 2-chloro-2-propenyl ester
U381	148-18-5	Carbamodithioic acid, diethyl, sodium salt
U383	128-03-0	Carbamodithioic acid, dimethyl-, potassium salt
U382	128-04-1	Carbamodithioic acid, dimethyl-, sodium salt
U376	144-34-3	Carbamodithioic acid, dimethyl-, tetraanhydrosulfide with orthothioselenious acid
U114	[1]111-54-6	Carbamodithioic acid, 1,2-ethanediylbis-, salts & esters
U378	51026-28-9	Carbamodithioic acid, (hydroxymethyl)methyl-, monopotassium salt
U062	2303-16-4	Carbamothioc acid, bis(1-methylethyl)-S-(2,3-dichloro-2-propenyl) ester
U384	137-42-8	Carbamodithioic acid, methyl-, monosodium salt
U377	137-41-7	Carbamodithioic acid, methyl-, monopotassium salt
U389	2303-17-5	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester
U392	2008-41-5	Carbamothioic acid, bis(2-methylpropyl)-, S-ether ester
U391	1114-71-2	Carbamothioic acid, butylethyl-, S-propyl ester
U386	1134-23-2	Carbamothioic acid, cyclohexylethyl-, S-ethyl ester
U390	759-94-4	Carbamothioic acid, dipropyl-, S-ethyl ester
U387	52888-80-9	Carbamothioic acid, dipropyl-, S-phenylmethyl) ester
U385	1929-77-7	Carbamothioic acid, dipropyl-, S-propyl ester
U279	63-25-2	Carbaryl
U372	10605-21-7	Carbendazim
U367	1563-38-8	Carbufuran phenol
U215	6533-73-9	Carbonic acid, dithallium (I+) salt
U033	353-50-4	Carbonic difluoride
U156	79-22-1	Carbonochloridic acid, methyl ester (I,T)
U033	353-50-4	Carbo oxyfluoride (R,T)
U211	56-23-5	Carbon tetrachloride
U034	75-87-6	Chloral
U035	305-03-3	Chlorambucil
U036	57-74-9	Chlordane, alpha & gamma isomers
U026	494-03-1	Chlornaphazin
U037	108-90-7	Chlorobenzene
U038	510-15-6	Chlorobenzilate
U039	59-50-7	p-Chloro-m-cresol

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U042	110-75-8	2-Chloroethyl vinyl ether
U044	67-66-3	Chloroform
U046	107-30-2	Chloromethyl methyl ether
U047	91-58-7	beta-Chloronaphthalene
U048	95-57-8	o-Chlorophenol
U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride
U032	13765-19-0	Chromic acid H_2CrO_4, calcium salt
U050	218-01-9	Chrysene
U393	137-29-1	Copper, bis(dimethylcarbamodithioato-S,S')-,
U393	137-29-1	Copper, dimethyldithiocarbamate
U051	.....	Creosote
U052	1319-77-3	Cresols (Cresylic acid)
U053	4170-30-3	Crotonaldehyde
U055	98-82-8	Cumene (I)
U246	506-68-3	Cyanogen bromide (CN)Br
U197	106-51-4	2,5-Cyclohexadiene-1,4-dione
U386	1134-23-2	Cycloate
U056	110-82-7	Cyclohexane (I)
U129	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-
U057	108-94-1	Cyclohexanone (I)
U130	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-
U058	50-18-0	Cyclophosphamide
U240	[1]94-75-7	2,4-D, salts and esters
U059	20830-81-3	Daunomycin
U060	72-54-8	DDD
U061	50-29-3	DDT
U366	533-74-4	Dazomet
U062	2303-16-4	Diallate
U063	53-70-3	Dibenz[a,h]anthracene
U064	189-55-9	Dibenzo[a,i]pyrene
U066	96-12-8	1,2-Dibromo-3-chloropropane
U069	84-74-2	Dibutyl phthalate
U070	95-50-1	o-Dichlorobenzene
U071	541-73-1	m-Dichlorobenzene
U072	106-46-7	p-Dichlorobenzene
U073	91-94-1	3,3'-Dichlorobenzidine
U074	764-41-0	1,4-Dichloro-2-butene (I,T)
U075	75-71-8	Dichlorodifluoromethane
U078	75-35-4	1,1-Dichloroethylene
U079	156-60-5	1,2-Dichloroethylene
U025	111-44-4	Dichloroethyl ether
U027	108-60-1	Dichloroisopropyl ether
U024	111-91-1	Dichloromethoxy ethane
U081	120-83-2	2,4-Dichlorophenol
U082	87-65-0	2,6-Dichlorophenol
U084	542-75-6	1,3-Dichloropropene
U085	1464-53-5	1,2:3,4-Diepoxybutane (I,T)
U395	5952-26-1	Diethylene glycol, dicarbamate
U108	123-91-1	1,4-Diethyleneoxide
U028	117-81-7	Diethylhexyl phthalate
U086	1615--80-1	N,N-Diethylhydrazine

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U087	3288-58-2	O,O-Diethyl-S-methyl-Dithiophosphate
U088	84-66-2	Diethyl phthalate
U089	56-53-1	Diethylstilbestrol
U090	94-58-6	Dihydrosafrole
U091	119-90-4	3,3'-Dimethoxybenzidine
U092	124-40-3	Dimethylamine (I)
U093	60-11-7	p-Dimethylaminoazobenzene
U094	57-97-6	7,12-Dimethylbenz[a]anthracene
U095	119-93-7	3,3'-Dimethylbenzidine
U096	80-15-9	alpha, alpha-Dimethylbenzylhydroperoxide (R)
U097	79-44-7	Dimethylcarbamoyl chloride
U098	57-14-7	1,1-Dimethylhydrazine
U099	540-73-8	1,2-Dimethylhydrazine
U101	105-67-9	2,4-Dimethylphenol
U102	131-11-3	Dimethyl phthalate
U103	77-78-1	Dimethyl sulfate
U105	121-14-2	2,4-Dinitrotoluene
U106	606-20-2	2,6-Dinitrotoluene
U107	117-84-0	Di-n-octyl phthalate
U108	123-91-1	1,4-Dioxane
U109	122-66-7	1,2-Diphenylhydrazine
U110	142-84-7	Dipropylamine (I)
U111	621-64-7	Di-n-propylnitrosamine
U403	97-77-8	Disulfiram
U390	759-94-4	EPTC
U041	106-89-8	Epichlorohydrin
U001	75-07-0	Ethanal (I)
U404	121-44-8	Ethanamine, N,N-diethyl-
U174	55-18-5	Ethanamine, N-ethyl-N-nitroso-
U155	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)-
U067	106-93-4	Ethane, 1,2-dibromo-
U076	75-34-3	Ethane, 1,1-dichloro-
U077	107-06-2	Ethane, 1,2-dichloro-
U131	67-72-1	Ethane, hexachloro-
U024	111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-
U117	60-29-7	Ethane, 1,1'-oxybis- (I)
U025	111-44-4	Ethane 1,1'-oxybis[2-chloro-
U184	76-01-7	Ethane, pentachloro-
U208	630-20-6	Ethane, 1,1,1,2-tetrachloro-
U209	79-34-5	Ethane, 1,1,2,2-tetrachloro-
U218	62-55-5	Ethanethioamide
U226	71-55-6	Ethane, 1,1,1-trichloro-
U227	79-00-5	Ethane, 1,1,2-trichloro-
U410	59669-26-0	Ethanimidothioic acid, N,N'-[thiobis [(methylimino)carbonyloxy]]bis-, dimethyl ester
U394	30558-43-1	Ethanimidothioic acid, 2-(dimethylamino)-N-hydroxy-2-oxo-, methyl ester
U359	110-80-5	Ethanol, 2-ethoxy-
U173	1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis-
U395	5952-26-1	Ethanol, 2,2'-oxybis-, dicarbamate
U004	98-86-2	Ethanone, 1-phenyl-
U043	75-01-4	Ethene, chloro-

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U042	110-75-8	Ethene, 2-chloroethoxy-
U078	75-35-4	Ethene, 1,1-dichloro-
U079	156-60-5	Ethene, 1,2-dichloro-, (E)-
U210	127-18-4	Ethene, tetrachloro-
U228	79-01-6	Ethene, trichloro-
U112	141-78-6	Ethyl acetate (I)
U113	140-88-5	Ethyl acrylate (I)
U238	51-79-6	Ethyl carbamate (urethane)
U117	60-29-7	Ethyl (ether (I)
U407	14324-55-1	Ethyl Ziram
U114	[1] 111-54-6	Ethylenebisdithiocarbamic acid, salts and esters
U067	106-93-4	Ethylene dibromide
U077	107-06-2	Ethylene dichloride
U359	110-80-5	Ethylene glycol monoethyl ether
U115	75-21-8	Ethylene oxide (I,T)
U116	96-45-7	Ethylenethiourea
U076	75-34-3	Ethylidene dichloride
U118	97-63-2	Ethyl methacrylate
U119	62-50-0	Ethylmethanesulfonate
U396	14484-64-1	Ferbam
U120	206-44-0	Fluoranthene
U122	50-00-0	Formaldehyde
U123	64-18-6	Formic acid (C,T)
U124	110-00-9	Furan (I)
U125	98-01-1	2-Furancarboxaldehyde (I)
U147	108-31-6	Furandione
U213	109-99-9	Furan, tetrahydro- (I)
U125	98-01-1	Furfural (I)
U124	110-00-9	Furfuran (I)
U206	18883-66-4	Glucopyranose, 2-deoxy-2(3-methyl-3-nitrosoureido)- D-
U206	18883-66-4	D-Glucose, 2-deoxy-2-[[(methylnitrosoamino)-carbonyl]amino]-
U126	765-34-4	Glycidylaldehyde
U163	70-25-7	Guanidine, N-methyl-N'-nitro-N-nitroso-
U127	118-74-1	Hexachlorobenzene
U128	87-68-3	Hexachlorobutadiene
U130	77-47-4	Hexachlorocyclopentadiene
U131	67-72-1	Hexachloroethane
U132	70-30-4	Hexachlorophene
U243	1888-71-7	Hexachloropropene
U133	302-01-2	Hydrazine (R,T)
U086	1615-80-1	Hydrazine, 1,2-diethyl-
U098	57-14-7	Hydrazine, 1,1-dimethyl-
U099	540-73-8	Hydrazine 1,2-dimethyl-
U109	122-66-7	Hydrazine, 1,2-diphenyl-
U134	7664-39-3	Hydrofluoric acid (C,T)
U134	7664-39-3	Hydrogen fluoride (C,T)
U135	7783-06-4	Hydrogen sulfide
U135	7783-06-4	Hydrogen sulfide H_2S
U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U116	96-45-7	2-Imidazolidinethione

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U137	193-39-5	Indeno[1,2,3-cd]pyrene
U375	55406-53-6	3-Iodo-2-propynyl n-butylcarbamate
U396	14484-64-1	Iron, tris(dimethylcarbamodithioato- S,S')-,
U190	85-44-9	1,3-Isobenzofurandione
U140	78-83-1	Isobutyl alcohol (I,T)
U141	120-58-1	Isosafrole
U142	143-50-0	Kepone
U143	303-34-4	Lasiocarpine
U144	301-04-2	Lead acetate
U146	1335-32-6	Lead, bis(acetato-O)tetrahydroxytri-
U145	7446-27-7	Lead phosphate
U146	1335-32-6	Lead subacetate
U129	58-89-9	Lindane
U163	70-25-7	MNNG
U147	108-31-6	Maleic anhydride
U148	123-33-1	Maleic hydrazide
U149	109-77-3	Malononitrile
U150	148-82-3	Melphalan
U151	7439-97-6	Mercury
U384	137-42-8	Metam Sodium
U152	126-98-7	Methacrylonitrile (I,T)
U092	124-40-3	Methanamine, N-methyl- (I)
U029	74-83-9	Methane, bromo-
U045	74-87-3	Methane, chloro- (I,T)
U046	107-30-2	Methane, chloromethoxy-
U068	74-95-3	Methane, dibromo-
U080	75-09-2	Methane, dichloro-
U075	75-71-8	Methane, dichlorodifluoro-
U138	74-88-4	Methane, iodo-
U119	62-50-0	Methanesulfonic acid, ethyl ester
U211	56-23-5	Methane, tetrachloro-
U153	74-93-1	Methanethiol (I,T)
U225	75-25-2	Methane, tribromo-
U044	67-66-3	Methane, trichloro-
U121	75-69-4	Methane, trichlorofluoro-
U036	57-74-9	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-
U154	67-56-1	Methanol (I)
U155	91-80-5	Methapyrilene
U142	143-50-0	1,3,4-Metheno-2H-cyclobuta[cd]pentalen-2-one,1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-
U247	72-43-5	Methoxychlor
U154	67-56-1	Methyl alcohol (I)
U029	74-83-9	Methyl bromide
U186	504-60-9	1-Methylbutadiene (I)
U045	74-87-3	Methyl chloride (I,T)
U156	79-22-1	Methyl chlorocarbonate (I,T)
U226	71-55-6	Methyl chloroform
U157	56-49-5	3-Methylcholanthrene
U158	101-14-4	4,4'-Methylenebis(2-chloroaniline)
U068	74-95-3	Methylene bromide
U080	75-09-2	Methylene chloride

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U159	78-93-3	Methyl ethyl ketone (MEK) (I,T)
U160	1338-23-4	Methyl ethyl ketone peroxide (R,T)
U138	74-88-4	Methyl iodide
U161	108-10-1	Methyl isobutyl ketone (I)
U162	80-62-6	Methyl methacrylate (I,T)
U161	108-10-1	4-Methyl-2-pentanone (I)
U164	56-04-2	Methylthiouracil
U010	50-07-7	Mitomycin C
U365	2212-67-1	Molinate
U059	20830-81-3	5,12-Naphthacenedione, 8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl)oxyl-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-, (8S-cis)-
U167	134-32-7	1-Naphthalenamine
U168	91-59-8	2-Naphthalenamine
U026	494-03-1	Naphthalenamine,N,N-bis(2-chloroethyl)-
U165	91-20-3	Naphthalene
U047	91-58-7	Naphthalene, 2-chloro-
U166	130-15-4	1,4-Naphthalenedione
U236	72-57-1	2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl-[1,1'-biphenyl]-4,4'diyl)-bis(azo)bis[5-amino-4-hydroxy]-tetrasodium salt
U279	63-25-2	1-Naphthalenol, methylcarbamate
U166	130-15-4	1,4,Naphthoquinone
U167	134-32-7	alpha-Naphthylamine
U168	91-59-8	beta-Naphthylamine
U217	10102-45-1	Nitric acid, thallium(1+) salt
U169	98-95-3	Nitrobenzene (I,T)
U170	100-02-7	p-Nitrophenol
U171	79-46-9	2-Nitropropane (I,T)
U172	924-16-3	N-Nitrosodi-n-butylamine
U173	1116-54-7	N-Nitrosodiethanolamine
U174	55-18-5	N-Nitrosodiethylamine
U176	759-73-9	N-Nitroso-N-ethylurea
U177	684-93-5	N-Nitroso-N-methylurea
U178	615-53-2	N-Nitroso-N-methylurethane
U179	100-75-4	N-Nitrosopiperidine
U180	930-55-2	N-Nitrosopyrrolidine
U181	99-55-8	5-Nitro-o-toluidine
U193	1120-71-4	1,2-Oxathiolane, 2,2-dioxide
U058	50-18-0	2H-1,3,2-Oxazaphosphorin-2-amine N,N-bis(2-chloroethyl)tetrahydro-, 2-oxide
U115	75-21-8	Oxirane (I,T)
U126	765-34-4	Oxiranecarboxyaldehyde
U041	106-89-8	Oxirane, (chloromethyl)-
U182	123-63-7	Paraldehyde
U391	1114-71-2	Pebulate
U183	608-93-5	Pentachlorobenzene
U184	76-01-7	Pentachloroethane
U185	82-68-8	Pentachloronitrobenzene (PCNB)
See F027	87-86-5	Pentachlorophenol
U161	108-10-1	Pentanol, 4-methyl-
U186	504-60-9	1,3-Pentadiene (I)

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U187	62-44-2	Phenacetin
U188	108-95-2	Phenol
U411	114-26-1	Phenol, 2-(1-methylethoxy)-, methylcarbamate
U048	95-57-8	Phenol, 2-chloro-
U039	59-50-7	Phenol, 4-chloro-3-methyl-
U081	120-83-2	Phenol, 2,4-dichloro-
U082	87-65-0	Phenol, 2,6-dichloro-
U089	56-53-1	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis-, (E)-
U101	105-67-9	Phenol, 2,4-dimethyl-
U052	1319-77-3	Phenol, methyl-
U132	70-30-4	Phenol, 2,2'-Methylenebis[3,4,6-trichloro-
U170	100-02-7	Phenol, 4-nitro-
See F027	87-86-5	Phenol, pentachloro-
See F027	58-90-2	Phenol, 2,3,4,6-tetrachloro-
See F027	95-95-4	Phenol, 2,4,5-trichloro-
See F027	88-06-2	Phenol, 2,4,6-trichloro-
U150	148-82-3	L-Phenylalanine, 4-[bis(chloroethyl)amino]-
U145	7446-27-7	Phosphoric acid, lead(2+)salt(2-3)
U087	3288-58-2	Phosphorodithioic acid; O,O-diethyl- S-methyl ester
U189	1314-80-3	Phosphorous sulfide (R)
U190	85-44-9	Phthalic anhydride
U191	109-06-8	2-Picoline
U179	100-75-4	Picoline,1-nitroso-
U400	120-54-7	Piperidine, 1,1'-(tetrathiodicarbonothioyl)-bis-
U383	128-03-0	Potassium dimethyldithiocarbamate
U378	51026-28-9	Potassium n-hydroxymethyl- n-methyldi-thiocarbamate
U377	137-41-7	Potassium n-methyldithiocarbamate
U192	23950-58-5	Pronamide
U194	107-10-8	1-Propanamine (I,T)
U111	621-64-7	1-Propanamine, N-Nitroso-N-propyl-
U110	142-84-7	1-Propanamine, N-propyl- (I)
U066	96-12-8	Propane, 1,2-dibromo-3-chloro-
U083	78-87-5	Propane, 1,2-dichloro-
U149	109-77-3	Propanedinitrile
U171	79-46-9	Propane, 2-nitro- (I,T)
U027	108-60-1	Propane, 2,2'oxybis[2-chloro-
U193	1120-71-4	1,3-Propane sultone
See F027	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxyl)-
U235	126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U140	78-83-1	1-Propanol, 2-methyl- (I,T)
U002	67-64-1	2-Propanone (I)
U007	79-06-1	2-Propenamide
U084	542-75-6	1-Propene, 1,3-dichloro-
U243	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-
U009	107-13-1	2-Propenenitrile
U152	126-98-7	2-Propanenitrile, 2-methyl- (I,T)
U008	79-10-7	2-Propenoic acid (I)
U113	140-88-5	2-Propenoic acid, ethyl ester (I)

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U118	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester
U162	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
U373	122-42-9	Propham
U411	114-26-1	Propoxur
U194	107-10-8	n-Propylamine (I,T)
U083	78-87-5	Propylene dichloride
U387	52888-80-9	Prosulfocarb
U148	123-33-1	3,6-Pyridazinedione, 1,2-dihydro-
U196	110-86-1	Pyridine
U191	109-06-8	Pyridine, 2-methyl-
U237	66-75-1	2,4(1H,3H)-Pyrimidinedione,5-[bis(2-chloroethyl) amino]-
U164	56-04-2	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-
U180	930-55-2	Pyrrolidine, 1-nitroso-
U200	50-55-5	Reserpine
U201	108-46-3	Resorcinol
U202	[1]81-07-2	Saccharin and salts
U203	94-59-7	Safrole
U204	7783-00-8	Selenious acid
U204	7783-00-8	Selenium dioxide
U205	7488-56-4	Selenium sulfide
U205	7488-56-4	Selenium sulfide SeS_2 (R,T)
U376	144-34-3	Selenium, tetrakis(dimethyldithiocarbamate)
U015	115-02-6	L-Serine, diazoacetate (ester)
See F027	93-72-1	Silvex (2,4,5-TP)
U379	136-30-1	Sodium dibutyldithiocarbamate
U381	148-18-5	Sodium diethyldithiocarbamate
U382	128-04-1	Sodium dimethyldithiocarbamate
U206	18883-66-4	Streptozotocin
U277	95-06-7	Sulfallate
U103	77-78-1	Sulfuric acid, dimethyl ester
U189	1314-80-3	Sulfur phosphide (R)
See F027	93-76-5	2,4,5-T
U402	1634-02-2	Tetrabutylthiuram disulfide
U207	95-94-3	1,2,4,5-Tetrachlorobenzene
U208	630-20-6	1,1,1,2-Tetrachloroethane
U209	79-34-5	1,1,2,2-Tetrachloroethane
U210	127-18-4	Tetrachloroethylene
See F027	58-90-2	2,2,4,6-Tetrachlorophenol
U213	109-99-9	Tetrahydrofuran (I)
U401	97-74-5	Tetramethylthiuram monosulfide
U214	563-68-8	Thallium(I) acetate
U215	6533-73-9	Thallium(I) carbonate
U216	7791-12-0	Thallium(I) chloride
U216	7791-12-0	Thallium chloride Tlcl
U217	10102-45-1	Thallium(I) nitrate
U366	533-74-4	2H-1,3,5-Thiadiazine- 2-thione, tetrahydro- 3,5-dimethyl-
U218	62-55-5	Thioacetamide

[1]CAS Number given for parent compound only.

Hazardous Waste No.	Chemical Abstracts No.	Substance
U410	59669-26-0	Thiodicarb
U153	74-93-1	Thiomethanol(I,T)
U244	137-26-8	Thioperoxydicarbonic diamide, $[(H_2N)C(S)]_2S_2$, tetra-methyl-
U402	1634-02-2	Thioperoxydicarbonic diamide, tetrabutyl
U403	97-77-8	Thioperoxydicarbonic diamide, tetraethyl
U409	23564-05-8	Thiophanate-methyl
U219	62-56-6	Thiourea
U244	137-26-8	Thiram
U220	108-88-3	Toluene
U221	25376-45-8	Toluenediamine
U223	26471-62-5	Toluene diisocyanate (R,T)
U328	95-53-4	o-Toluidine
U353	106-49-0	p-Toluidine
U222	636-21-5	o-Toluidine hydrochloride
U389	2303-17-5	Triallate
U011	61-82-5	1H-1,2,4,-Triazol-3-amine
U227	79-00-5	1,1,2-Trichloroethane
U228	79-01-6	Trichloroethylene
U121	75-69-4	Trichloromonofluoromethane
See F027	95-95-4	2,4,5-Trichlorophenol
See F027	88-06-2	2,4,6-Trichlorophenol
U404	121-44-8	Triethylamine
U234	99-35-4	1,3,5-Trinitrobenzene (R,T)
U182	123-63-7	1,3,5-Trioxane, 2,4,6-trimethyl-
U235	126-72-7	Tris(2,3-dibromopropyl) phosphate
U236	72-57-1	Trypan blue
U237	66-75-1	Uracil mustard
U176	759-73-9	Urea, N-ethyl-N-nitroso-
U177	684-93-5	Urea, N-methyl-N-nitroso-
U385	1929-77-7	Vemolate
U043	75-01-4	Vinyl chloride
U248	[1]81-81-2	Warfarin, when present at concentrations of 0.3% or less
U239	1330-20-7	Xylene (I)
U200	50-55-5	Yohimban-l6-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester, (3beta,16beta,17alpha,18beta,20alpha)-
U407	14324-55-1	Zinc, bis(diethylcarbamodithioato- S,S')-
U249	1314-84-7	Zinc phosphide, Zn_3P_2 when present at concentrations of 10% or less

[1]CAS Number given for parent compound only.

261.35 Deletion of Certain Hazardous Waste Codes Following Equipment Cleaning and Replacement.

(a) Wastes from wood preserving processes at plants that do not resume or initiate use of chlorophenolic preservatives will not meet the listing definition of F032 once the generator has met all of the requirements of paragraphs (b) and (c) of this section. These wastes may, however, continue to meet another hazardous waste listing description or may exhibit one or more of the hazardous waste characteristics.

(b) Generators must either clean or replace all process equipment that may have come into contact with chlorophenolic formulations or constituents thereof, including, but not limited to, treatment cylinders, sumps, tanks, piping systems, drip pads, fork lifts, and trams, in a manner which minimizes or eliminates the escape of hazardous waste or waste constituents, leachate, contaminated drippage, or hazardous waste decomposition products to the ground water, surface water, or atmosphere.

(1) Generators shall do one of the following:

(i) Prepare and follow an equipment cleaning plan and clean equipment in accordance with this section:

(ii) Prepare and follow an equipment replacement plan and replace equipment in accordance with this section; or

(iii) Document cleaning and replacement in accordance with this section, carried out after termination of use of chlorophenolic preservations.

(2) Cleaning Requirements.

(i) Prepare and sign a written equipment cleaning plan that describes:

(A) The equipment to be cleaned;

(B) How the equipment will be cleaned;

(C) The solvent to be used in cleaning;

(D) How solvent rinses will be tested; and

(E) How cleaning residues will be disposed.

(ii) Equipment must be cleaned as follows:

(A) Remove all visible residues from process equipment;

(B) Rinse process equipment with an appropriate solvent until dioxins and dibenzofurans are not detected in the final solvent rinse.

(iii) Analytical requirements.

(A) Rinses must be tested in accordance with SW-846, Method 8290.

(B) "Not detected" means at or below the lower method calibration limit (MCL) in Method 8290, Table 1.

(iv) The generator must manage all residues from the cleaning process as F032 waste.

(3) Replacement requirements.

(i) Prepare and sign a written equipment replacement plan that describes:

(A) The equipment to be replaced;

(B) How the equipment will be replaced; and

(C) How the equipment will be disposed.

(ii) The generator must manage the discarded equipment as F032 waste.

(4) Documentation requirements.

(i) Document that previous equipment cleaning and/or replacement was performed in accordance with this section and occurred after cessation of use of chlorophenolic preservatives.

(c) The generator must maintain the following records documenting the cleaning and replacement as part of the facility's operating record:

(1) The name and address of the facility;

(2) Formulations previously used and the date on which their use ceased in each process at the plant;

(3) Formulations currently used in each process at the plant;

(4) The equipment cleaning or replacement plan;

(5) The name and address of any persons who conducted the cleaning and replacement;

(6) The dates on which cleaning and replacement were accomplished;

(7) The dates of sampling and testing;

(8) A description of the sample handling and preparation techniques, including techniques used for extraction, containerization, preservation, and chain-of-custody of the samples;

(9) A description of the tests performed, the date the tests were performed, and the results of the tests;

(10) The name and model numbers of the instrument(s) used in performing the tests;

(11) QA/QC documentation; and

(12) The following statement signed by the generator or his authorized representative:

I certify under penalty of law that all process equipment required to be cleaned or replaced under 40 CFR 261.35 was cleaned or replaced as represented in the equipment cleaning and replacement plan and accompanying documentation. I am aware that there are significant penalties for providing false information, including the possibility of fine or imprisonment.

(e) The Appendices to 40 CFR Part 261 are incorporated by reference including subsequent amendments and editions.

APPENDIX I - REPRESENTATIVE SAMPLING METHODS

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Samples collected using the sampling protocols listed below, for sampling waste with properties similar to the indicated materials, will be considered by the Agency to be representative of the waste.

Extremely viscous liquid - ASTM Standard D140-70 Crushed or powdered material - ASTM Standard D346-75 Soil or rock-like material - ASTM Standard D420-69 Soil-like material - ASTM Standard D1452-65

Fly Ash-like material - ASTM Standard D2234-76 [ASTM Standards are available from ASTM, 1916 Race St., Philadelphia, PA 19103].

Containerized liquid wastes - "COLIWASA" described in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods,"[1a] U.S. Environmental Protection Agency, Office of Solid Waste, Washington, D.C. 20460. [Copies may be obtained from Solid Waste Information, U.S. Environmental Protection Agency, 26 W. St. Clair St., Cincinnati, Ohio 45268].

Liquid waste in pits, ponds, lagoons, and similar reservoirs. - "Pond Sampler" described in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods."[1a]

This manual also contains additional information on application of these protocols.

Appendix II to Part 261--Method 1311
Toxicity Characteristic Leaching Procedure
(TCLP)

Note: The TCLP (Method 1311) is published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of this chapter.

APPENDIX III TO PART 261 -- CHEMICAL ANALYSIS TEST METHODS

Note: Appropriate analytical procedures to determine whether a sample contains a given toxic constituent are specified in Chapter Two, "Choosing the Correct Procedure" found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of this chapter. Prior to final sampling and analysis method selection, the individual should consult the specific section or method described in SW-846 for additional guidance on which of the approved methods should be employed for a specific sample analysis situation.

APPENDIX VII TO PART 261 - BASIS FOR LISTING HAZARDOUS WASTE

EPA Hazardous Waste No	Hazardous Constituents for Which Listed
F001.....	Tetrachloroethylene, methylene chloride trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated fluoro-carbons
F002.....	Tetrachloroethylene,; methylene chloride trichloroethylene, 1, 1, 1-trichloroethane 1, 1, 2-trichloroethane, chlorobenzene, 1,1, 2-trichoro-1, 2,2-trifluoro-ethane, ortho-dichlorobenzene, trichlorofluoromethane.
F003.....	N.A.
F004.....	Cresols and cresylic acid, nitrobenzene
F005.....	Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, 2-othoxyethanol, benzene 2-nitropropane.
F006.....	Cadmium, hexavalent chromium, nickel, cyanide (complexed)
F007.....	Cyanide (salts)
F008.....	Cyanide (salts)
F009.....	Cyanide (salts)
F010.....	Cyanide (salts)
F011.....	Cyanide (salts)
F012.....	Cyanide (complexed)
F019.....	Hexavalent chromium, cyanide (complexed)
F020.....	Tetra- and pentachlorodibenzo-p-dioxins; tetra and pentachlorodi-benzofurans; tri- and tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F021.....	Penta- and hexachlorodibenzo-p-dioxins; penta- and hexachlorodibenzofurans; pentachlorophenol and its derivatives.
F022.....	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-penta-, and hexachlorodibenzofurans.
F023.....	Tetra-, and pentachlorodibenzo-p-dioxins; tetra- and pentachlorodibenzofurans; tri- and tetra-chlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F024.....	Chloromethane, dichloromethane, trichloromethane, carbon tetrachloride, chloroethylene, 1,1-dichloroethanel, 2 dichloroethane, trans-1--2 dichloroethylene, 1,1-dichloroethylene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethylene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, tetrachloroethylene, pentachloroethane, hexachloroethane, allyl chloride (3-chloropropene), dichloropropene, 2-chloro-1,3-butadiene, hexachloro-1,3-butadine, hexachlorocyclopentadiene, hexachlorocyclohexane, benzene, chlorbenzene, dichlorobenzenes, 1,2,4-trichlorobenzene, tetrachlorobenzene, pentachlorobenzene,

EPA Hazardous Waste No	Hazardous Constituents for Which Listed
	hexachlorobenzene, toluene, naphthalene
F025.....	Chloromethane; Dichloromethane; Trichloromethane; Carbon tetrechloride; Chloroethylene; 1,1-Dichloroethane; 1,2-Dichloroethane; trans-1,2-Dichloroethylene; 1,1-Dichloroethylene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; Trichloroethylene; 1,1,1,2-Tetrachloroethane; 1,1,2,2-Tetrachloroethane; Tetrachloroethylene; Pentachloroethane; Hexachloroethane; Allyl chloride (3-Chloropropene); Dichloropropane; Dichloropropene; 2-Chloro-1,3-butadiene; Hexachloro-1,3-butatiene; Hexachlorocyclopentadiene; Benzene; Chlorobenzene; Dichlorobenzene; 1,2,4-Trichlorobenzene; Tetrachlorobenzene; Pentachlorobenzene; Hexachlorobenzene; Toluene; Naphthalene.
F026.....	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans
F027.....	Teta-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F028.....	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-.penta-, and exachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F032.....	Benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)-anthracene, indeno(1,2,3-cd)pyrene, pentachlorophenol, arsenic, chromium, tetra-, penta-, hexa-, heptachlorodibenzo-p-dioxins, tetra-, penta-, hexa-, heptachlorodibenzofurans.
F034.....	Benz(a)anthracene, benzo(k)fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, arsenic, chromium.
F035.....	Arsenic, chromium, lead.
F037.....	Benzene, benzo(a)pyrene, chrysene, lead, chromium.
F038.....	Benzene, benzo(a)pyrene chrysene, lead, chromium.
F039.....	All constituents for which treatment standards are specified for multi-source leachate (wastewaters and non-wastewaters) under 40 CFR 268.43(a), Table CCW.
K001.....	Pentachlorophenol, phenol, 2-chlorophenol, p-chloro-m-cresol, 2,4-dimethylphenyl, 2,4-dinitrophenol, trichlorophenols, tetrachlorophenols, 2,4-dinitrophenol, creosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benz(a)anthracene, dibenz(a)-anthracene, acenaphthalene
K002.....	Hexavalent chromium, lead
K003.....	Hexavalent chromium, lead
K004.....	Hexavalent chromium
K005.....	Hexavalent chromium, lead
K006.....	Hexavalent chromium
K007.....	Cyanide (complexed), hexavalent chromium
K008.....	Hexavalent chromium
K009.....	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid
K010.....	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid, chloroacetaldehyde
K011.....	Acrylonitrile, acetonitrile, hydrocyanic acid
K013.....	Hydrocyanic acid, acrylonitrile, acetonitrile
K014.....	Acetonitrile, acrylamide
K015.....	Benzyl chloride, chlorobenzene, toluene, benzotrichloride
K016.....	Hexachlorobenzene, hexachlorobutadiene, carbon tetrachloride, hexachloroethane, perchloroethylene
K017.....	Epichlorohydrin, chloroethers [bis(chloromethyl) ether and bis (2-chloroethyl) ethers] trichloropropane, dichloropropanols

EPA Hazardous Waste No	Hazardous Constituents for Which Listed
K018.....	1,2-dichloroethane, trichloroethylene, hexachlorobutadiene, hexachlorobenzene
K019.....	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-tetrachloroethane), trichloroethylene,tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride
K020.....	Ethylene dichloride, 1,1,1-trichloroethane, 1,1,2-trichloroethane, tetrachloroethanes (1,1,2,2-tetrachloroethane and 1,1,1,2-trachloroethane), trichloroethylene, tetrachloroethylene, carbon tetrachloride, chloroform, vinyl chloride, vinylidene chloride
K021.....	Antimony, carbon tetrachloride, chloroform
K022.....	Phenol, tars (polycyclic aromatic hydrocarbons)
K023.....	Phthalic anhydride, maleic anhydride
K024.....	Phthalic anhydride, 1,4-naphthoquinone
K025.....	Meta-dinitrobenzene, 2,4-dinitrotoluene
K026.....	Paraldehyde, pyridines, 2-picoline
K027.....	Toluene diisocyanate, toluene-2, 4-diamine
K028.....	1,1,1-trichloroethane, vinyl chloride
K029.....	1,2-dichloroethane, 1,1,1-trichloroethane, vinyl chloride, vinylidene chloride, chloroform
K030.....	Hexachlorobenzene, hexachlorobutadiene, hexachloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, ethylene dichloride
K031.....	Arsenic
K032.....	Hexachlorocyclopentadiene
K033.....	Hexachlorocyclopentadiene
K034.....	Hexachlorocyclopentadiene
K035.....	Creosote, chryene, naphthalene, fluoranthene benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd) pyrene, benzo(a)anthracene, dibenzo(a)anthracene, acenaphthalene
K036.....	Toluene, phosphorodithioic and phosphorothioic acid esters
K037.....	Toluene, phosphorodithioic and phosphorothioic acid esters
K038.....	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters
K039.....	Phosphorodithioic and phosphorothioic acid esters
K040.....	Phorate, formaldehyde, phosphorodithioic and phosphorothioic acid esters
K041.....	Toxaphene
K042.....	Hexachlorobenzene, ortho-dichlorobenzene
K043.....	2,4-dichlorophenol, 2,6-dichlorophenol 2,4,6-trichlorophenol
K044.....	N.A.
K045.....	N.A.
K046.....	Lead

APPENDIX VII TO PART 261 - BASIS FOR LISTING HAZARDOUS WASTE

EPA Hazardous Waste No	Hazardous Constituents for Which Listed
K047.....	N.A.
K048.....	Hexavalent chromium, lead
K049.....	Hexavalent chromium, lead
K050.....	Hexavalent chromium
K051.....	Hexavalent chromium, lead
K052.....	Lead
K060.....	Cyanide, napthalene, phenolic compounds, arsenic
K061.....	Hexavalent chromium, lead, cadmium
K062.....	Hexavalent chromium, lead
K064.....	Lead, cadmium
K065.....	Do
K066.....	Do
K069.....	Hexavalent chromium, lead, cadmium
K071.....	Mercury
K073.....	Chloroform, carbon tetrachloride, hexachloroethane, trichloroethane, tetrachloroethylene, dichloroethylene, 1,1,2,2-tetrachloroethane
K083.....	Aniline, diphenylamine, nitrobenzene, phenylenediamine
K084.....	Arsenic
K085.....	Benzene, dichlorobenzenes, trichlorobenzenes, tetrachlorobenzenes, pentachlorobenzene, hexachlorobenzene, benzyl chloride
K086.....	Lead, hexavalent chromium
K087.....	Phenol, naphthalene
K088.....	Cyanide (complexes)
K090.....	Chromium
K091.....	Do
K093.....	Phthalic anhydride, maleic anhydride
K094.....	Phthalic anhydride
K095.....	1,1,2-trichloroethane, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane
K096.....	1,2-dichloroethane, 1,1,1-trichloroethane, 1,1,2-trichloroethane
K097.....	Chlordane, heptachlor
K098.....	Toxaphene
K099.....	2,4-dichlorophenol, 2,4,6-trichlorophenol
K100.....	Hexavalent chromium, lead, cadmium
K101.....	Arsenic
K102.....	Arsenic
K103.....	Aniline, nitrobenzene, phenylenediamine
K104.....	Aniline, benzene, diphenylamine, nitrobenzene phenylenediamine
K105.....	Benzene, monochlorobenzene, dichlorobenzenes, 2,4,6-trichlorophenol
K106.....	Mercury
K107.....	1,1-Dimethylhydrazine (UDMH).
K108.....	1,1-Dimethylhydrazine (UDMH).
K109.....	1,1-Dimethylhydrazine (UDMH).
K110.....	1,1-Dimethylhydrazine (UDMH).
K111.....	2,4-Dinitrotoluene
K112.....	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline
K113.....	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline
K114.....	2,4-Toluenediamine, o-toluidine, p-toluidine, aniline
K115.....	2,4-Toluenediamine
K116.....	Carbon tetrachloride, tetrachloroethylene, chloroform, phosgene
K117.....	Ethylene dibromode
K118.....	Ethylene dibromode
K123.....	Ethylene thiourea
K124.....	Ethylene thiourea
K125.....	Ethylene thiourea

APPENDIX VII TO PART 261 - BASIS FOR LISTING HAZARDOUS WASTE

EPA Hazardous Waste No	Hazardous Constituents for Which Listed
K126.....	Ethylene thiourea
K131.....	Dimethyl sulfate, Methyl bromide
K132.....	Methyl bromide
K136.....	Ethylene dibromode
K141.....	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)(fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
K142.....	Benzene,benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)(fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
K143.....	Benzene, benz(a)anthracene, benzo(b)fluoranthene benzo(k)fluoranthene.
K144.....	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)(fluoranthene, dibenz(a,h)anthracene.
K145.....	Benzene, benz(a)anthracene, benzo(a)pyrene, dibenz(a,h)anthrancene, naphthalene.
K147.....	Benzene, benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene. benzo(k)(fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
K148.....	Benz(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-cd)pyrene.
K149.....	Benzotrichloride, benzyl chloride, chloroform, chloromethane, chlorobenzene, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1, 2, 4,5-tetrachlorobenzene, toluene.
K150.....	Carbon tetrachloride, chloroform, chloromethane, 1,4-dichlorobenzene, hexachlorobenzene, pentachlorobenzene, 1,2,4-5-tetrachlorobenzene, 1,1-2-2-tetrachloroethene, tetrachloroethylene, 1,2-4-trichlorobenzene.
K151.....	Benzene, carbon tetrachloride, chloroform, hexachorobenzene, pentachlorobenzene, toluene, 1,2,4,5-tetrachlorobenzene, tetrachloroethylene.
K156.....	Benomyl, carbaryl, carbendazim, carbofuran, carbosulfan, formaldehyde, methylene chloride, triethylamine
K157.....	Carbon tetrachloride, formaldehyde, methyl chloride, methylene chloride, pyridine, triethylamine
K158.....	Benomyl, carbendazim, carbofuran, carbosulfan, chloroform, methylene chloride
K159.....	Benzene, butylate, eptc, molinate, pebulate, vemolate
K160.....	Benzene, butylate, eptc, molinate, pebulate, vemolate
K161.....	Antimony, arsenic, metam-sodium, ziram

N.A. - Waste is hazardous because it fails the test for the characteristic of ignitability, corrosivity, or reactivity.

Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
A2213	Ethanimidothioic acid, 2- (dimethylamino) N-hydroxy-2-oxo-, methyl ester	30558-43-1	U394
Acetonitrile	Same	75-05-8	U003
Acetophenone	Ethanone, 1-phenyl-	98-86-2	U004
2-Acetylaminefluarone	Acetamide, N-9H-fluoren-2-yl	53-96-3	U005
Acetyl chloride	Same	75-36-5	U006
1-Acetyl-2-thiourea	Acetamide, N-(aminothioxomethyl)-	591-08-2	P002
Acrolein	2-Propenal	107-02-8	P003
Acrylamide	2-Propenamide	79-06-1	U007
Acrylonitrile	2-Propenenitrile	107-13-1	U009
Aflatoxins	Same	1402-68-2	.....
Aldicarb	Propanal, 2-methyl-2-(methylthio)- O-[(methylamino) carbonyl]oxime	116-06-3	P070
Aldicarb sulfone	Propanal, 2-methyl-2- (methylsulfonyl)-, 0-[(methylamino) carbonyl) oxime	646-88-4	P203
Aldrin	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10, 10-hexachloro-1,4,4a,5,8,8a-hexahydro-, (1alpha,4alpha,4abeta,5alpha,8alpha, 8abeta)-	309-00-2	P004
Allyl alcohol	2-Propen-1-ol	107-18-6	P005
Allyl chloride	1-Propane, 3-chloro	107-18-6	
Aluminum phosphide	Same	20859-73-8	P006
4-Aminobiphenyl	(1,1'-Biphenyl)-4-amine	92-67-1	
5-(Aminomethyl)- 3-isoxazolol	3(2H)-Isoxazolone, 5-(aminomethyl)-	2763-96-4	P007
4-Aminopyridine	4-Pyridinamine	504-24-5	P008
Amitrole	1H-1,2,4-Triazol-3-amine	61-82-5	U011
Ammonium vanadate	Vanadic acid, ammonium salt	7803-55-6	P119
Aniline	Benzenamine	62-53-3	U012
Antimony	Same	7440-36-0	
Antimony compounds, N.O.S.[1]	.....	.....	.....
Aramite	Sulfurous acid, 2-chloroethyl-, 2-[4-(1,1- dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8	.....
Arsenic	Same	7440-38-2	.....
Arsenic compounds, N.O.S.[1]	.....	.....	.....
Arsenic acid	Arsenic acid H_3AsO_4	7778-39-4	P010
Arsenic pentoxide	Arsenic oxide As_2O_5	1303-28-2	P011
Arsenic trioxide	Arsenic oxide As_2O_3	1327-53-3	P012
Auramine	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl	492-80-8	U014
Azaserine	L-Serine, diazoacetate (ester)	115-02-5	U015
Barban	Carbamic acid, (3-chlorophenyl)-, 4-chloro-2-butymyl ester	101-27-9	U280
Barium	Same	7440-39-3	.....
Barium compounds, N.O.S.[1]	.....	.....	.....
Barium cyanide	Same	542-62-1	P013
Bendiocarb	1,3-Benzodioxol-4-oi, 2,2-dimethyl-, methyl carbamate	22781-23-3	U278
Bendiocarb phenol	1,3-Benzodioxol-4-oi, 2,2-dimethyl-	22961-82-6	U364
Benomyl	Carbamic acid, (1- [(butylamino) carbonyl)- 1H-benzimidazol-2-yl]- methyl	17804-35-2	U271
Benz[c]acridine	Same	225-51-4	U016
Benz[a]anthracene	Same	56-55-3	U018
Benzal chloride	Same	71-43-2	U019
Benzenearsonic acid	Arsonic acid,phenyl-	98-05-5	.....

[1] The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.

Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
Benzidine	[1,1'-Biphenyl]-4,4'-diamine	92-87-5	U021
Benzo[b]fluoranthene	Benz[e]acephenanthrylene	205-99-2	.....
Benzo[j]fluoranthene	Same	205-82-3	.....
Benzo(k)fluoranthene	Same	207-08-9	.....
Benzo[a]pyrene	Same	50-32-8	U022
p-Benzoquinone	2,5-Cyclohexadiene- 1,4-dione	106-51-4	U197
Benzotrichloride	Benzene, (trichloromethyl)-	98-07-7	U023
Benzyl chloride	Benzene, (chloromethyl)-	100-44-7	P028
Beryllium	Same	7440-41-7	P015
Beryllium compounds,N.O.S.[1]	.....	.....	.....
Bis (pentamethylene)-thiuram tetrasulfide	Piperidine, 1,1'-(tetrathiodicarbonothioyl)-bis-	120-54-7	U400
Bromoacetone	2-Propanone, 1-bromo-	598-31-2	P017
Bromoform	Methane, tribromo-	75-25-2	U225
4-Bromophenyl phenyl ether	Benzene, 1-bromo-4-phenoxy	101-55-3	U030
Brucine	Strychnidin-10-one, 2,3-dimethoxy	357-57-3	P018
Butyl benzyl phthalate	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester	85-68-7	.....
Butylate	Carbamothioic acid, bis (2-methylpropyl)-, S-ethyl ester	2008-41-5	U392
Cacodylic acid	Arsinic acid, dimethyl	75-60-5	U136
Cadmium	Same	7440-43-9	.....
Cadmium compounds, N.O.S.[1]	.....	.....	.....
Calcium chromate	Chromic acid, H_2CrO_4, calcium salt	13765-19-0	U032
Calcium cyanide	Calcium Cyanide $Ca(CN)_2$	92-01-8	P021
Carbaryl	1-Naphthalenol, methylcarbamate	63-25-2	U279
Carbendazim	Carbamic acid, 1H-benzimidazol-2-yl, methyl ester	10605-21-7	U372
Carbofuran	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-, methylcarbamate	1563-66-2	P127
Carbofuran phenol	7-Benzofuranol, 2,3-dihydro-2,2-dimethyl-	1563-38-8	U367
Carbon disulfide	Same	75-15-0	P022
Carbon oxyfluoride	Carbonic difluoride	353-50-4	U033
Carbon tetrachloride	Methane, tetrachloro-	56-23-5	U211
Carbonsulfan	Carbamic acid, [(dibutylamino) thio] methyl-, 2,3-dihydro-2,2-dimethyl-7- benzofuranyl ester	55285-14-8	P189
Chloral	Acetaldehyde, trichloro-	75-87-6	U034
Chlorambucil	Benzenebutanoic acid, 4-[bis(2-chloroethy)amino	305-03-3	U034
Chlordane	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8 -octachloro-2,3,3a,4,7,7a-hexahydro-	57-74-9	U036
Chlordane, (alpha and gamma isomers)	.....	.....	U036
Chlorinated benzenes, N.O.S.[1].	.....	.....	.....
Chlorinated ethane, N.O.S.[1]	.....	.....	.....
Chlorinated fluorocarbons, N.O.S.[1]	.....	.....	.....
Chlorinated naphthalene N.O.S.[1]	.....	.....	.....
Chlorinated phenol,N.O.S.[1]	.....	.....	.....
Chlornaphazin	Naphthalenamine, N,N'-bis(2-chloroethyl)	494-03-1	U026
Chloroacetaldehyde	Acetaldehyde, chloro-	107-20-0	P023

[1] The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.

Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
Chloroalkyl ethers, N.O.S.[1]	.....	.....	.....
p-Chloroaniline	Benzenamine, 4-chloro	106-47-8	P024
Chlorobenzene	Benzene, chloro	108-90-7	U037
Chlorobenzilate	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester	510-15-6	U038
p-Chloro-m-cresol	Phenol, 4-chloro-3-methyl-	59-50-7	U039
2-Chloroethyl vinyl ether	Ethene, (2-chloroethoxy)-	110-75-8	U042
Chloroform	Methane, trichloro-	67-66-3	U044
Chloromethyl methyl ether	Methane, chloromethoxy-	107-30-2	U046
beta Chloronaphthalene	Napthalene, 2-chloro	91-58-7	U047
o-Chlorophenol	Phenol, 2-chloro-	95-57-8	U048
1-(o-Chlorophenyl)thiourea	Thiourea, (2-chlorophenyl)-	5344-82-1	P026
Chloroprene	1,3-Butadiene,2-Chloro-	126-99-8	.....
3-Chloropropionitrile	Propanenitrile, 3-chloro-	542-76-7	P027
Chromium	Same	7440-47-3	.....
Chromium compounds, N.O.S.[1]	.....	.....	.....
Chrysene	Same	218-01-9	U050
Citrus red No. 2	2-Naphthalenol, 1-[(2,5-dimethoxyphenyl)azo]	6358-53-8	.....
Coal tar creosote	Same	8007-45-2	.....
Copper cyanide	Copper cyanide CuCN	544-92-3	P029
Copper dimethyldithiocabamate.	Copper, bis-dimethylcarbamodithioato-S,S')-,	137-29-1	U393
Creosote	Same	.....	U051
Cresol (Cresylic acid)	Phenol, methyl-	1319-77-3	U052
Crotonaldehyde	2-Butenal	4170-30-3	U053
m-Cumenyl methylcarbamate	Phenol, 3-(methylethyl)-, methyl carbamate	64-00-6	P202
Cyanides (soluble salts and complexes) N.O.S.[1]	.....	.....	P030
Cyanogen	Ethanedinitrile	460-19-5	P031
Cyanogen bromide	Cyanogen bromide (CN)Br	506-68-3	U246
Cyanogen chloride	Cyanogen chloride (CN)Cl	506-77-4	P033
Cycasin	beta-D-Glucopyranoside, (methyl-ONN-azoxy) methyl	14901-08-7	.....
Cycloate	Carbamothioic acid, cyclohexylethyl-, S-ethyl ester	.....	U386
2-Cyclohexyl-4,6-dinitrophenol. Phenol,	2-cyclohexyl-4,6-dinitro	131-89-5	P034
Cyclophosphamide	2H-1,3,2-Oxazaphosphorin-2-amine, N,N,-bis) 2-chloroethyl)tetrahydro-,2-oxide	50-18-0	U058
2,4-D	Acetic acid, (2,4-dichlorophenoxy)-	94-75-7	U240
2,4-D, salts, esters	.....	.....	U240
Daunomycin	5,12-Naphthacenedione, -8-acetyl-10- [(3-amino-2,3,6-trideoxy-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-(8S-cis)-	20830-81-3	U059
DDD	Benzene, 1,1'-(2,2-dichloroethylidene bis[4-chloro-	72-54-8	U060
DDE	Benzene, 1,1'-(dichloroethenylindene bis[4-chloro-	72-55-9	.....
DDT	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis [4-chloro-	50-29-3	U061
Dazomet	2H-1,3,5-thiadiazine-2-thione, tetrahydro-3,5-dimethyl	533-74-4	U366
Diallate	Carbamothioic acid, bis(1-methylethyl) -S-(2,3-dichloro-2-propenyl) ester	2303-16-4	U062
Dibenz[a,h]acridine	Same	226-36-8	.....
Dibenz[a,j]acridine	Same	224-42-0	.....
Dibenz[a,h]anthracene	Same	53-70-3	U063
7H-Dibenzo[c.g]carbazole	Same	194-59-2	.....
Dibenzo[a,e]pyrene	Naphtho[1,2,3,4-def]chrysene	192-65-4	.....

[1] The abbreviation N.O.S. (not otherwise specified) signifies those members the general class not specifically listed by name in this appendix.

Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
Dibenzo[a,h]pyrene	Dibenzo[b,def]chrysene	189-64-0	.....
Dibenzo[a,i]pyrene	Benzo[rst]pentaphene	189-55-9	U064
1,2-Dibromo-3-chloropropane	Propane, 1,2-dibromo-3-chloro	96-12-8	U066
Dibutyl phthalate	1,2-Benzenedicarboxylic acid, dibutyl ester	84-74-2	U069
o-Dichlorobenzene	Benzene, 1,2-dichloro-	95-50-1	U070
m-Dichlorobenzene	Benzene, 1,3-dichloro-	541-73-1	U071
p-Dichlorobenzene	Benzene, 1,4-dichloro-	106-46-7	U072
Dichlorobenzene, N.O.S[1]	Benzene, dichloro-	25321-22-6	.....
3,3'-Dichlorobenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-	91-94-1	U073
1,4-Dichloro-2-butene	2-Butene, 1,4-dichloro-	764-41-0	U074
Dichlorodifluoromethane	Methane, dichlorodifluoro-	75-71-8	U075
Dichloroethylene, N.O.S[1]	Dichloroethylene	25323-30-2	.....
1,1-Dichloroethylene	Ethene, 1,1-dichloro-	75-35-4	U078
1,2-Dichloroethylene	Ethene, 1,2-dichloro-, (E)-	156-60-5	U079
Dichloroethyl ether	Ethane, 1,1'oxybis[2-chloro-	111-44-4	U025
Dichloroisopropyl ether	Propane, 2,2'-oxybis[2-chloro-	108-60-1	U027
Dichloromethoxy ethane	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro	111-91-1	U024
Dichloromethyl ether	Methane, oxybis[chloro-	542-88-1	P016
2,4-Dichlorophenol	Phenol, 2,4-dichloro-	120-83-2	U081
2,6-Dichlorophenol	Phenol, 2,6-dichloro-	87-65-0	U082
Dichlorophenylarsine	Arsonous dichloride, phenyl-	696-28-6	P036
Dichloropropane, N.O.S.[1]	Propane, dichloro-	26638-19-7	.....
Dichloropropanol,N.O.S.[1]	Propanol, dichloro-	26545-73-3	.....
Dichloropropene, N.O.S.[1]	1-Propene, dichloro-	26952-23-8	.....
1,3-Dichloropropene	1-Propene, 1,3-dichloro-	542-75-6	U084
Dieldrin	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro -1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta, 6 beta,6 aalpha,7beta,7aalpha	60-57-1	P037
1,2:3,4-Diepoxybutane	2,2'Bioxirane	1464-53-5	U085
Diethylarsine	Arsine, diethyl-	692-42-2	P038
Diethylene glycol, dicarbamate	Ethanol, 2,2'-oxybis-, dicarbamate	5952-26-1	U395
1,4 Diethyleneoxide	1,4 Dioxane	123-91-1	U108
Diethylhexyl phthalate	1,2-Benzenedicarboxylic acid, bis(2-ethylhexy) ester	117-81-7	U028
N,N'-Diethylhydrazine	Hydrazine, 1,2-diethyl	1615-80-1	U086
O,O-Diethyl S-methyl dithiophosphate	Phosphorodithioic acid, O,O-diethyl S-methyl ester	3288-58-2	U087
Diethyl-p-nitrophenyl phosphate	Phosphoric acid, diethyl-4-nitrophenyl ester	311-45-5	P041
Diethyl phthalate	1,2-Benzenedicarboxylic acid, diethyl ester	84-66-2	U088
O,O-Diethyl O-pyrazinyl phosphorothioate	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	297-97-2	P040
Diethylstilbesterol	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl) bis,(E)	56-53-1	U089
Dihydrosafrole	1,3 Benzodioxole, 5-propyl-	94-58-6	U090
Diisopropylfluorophos-(DFP)	Phosphorofluoridic acid, bis(1-methylethyl) phate ester	55-91-4	P043
Dimethoate	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester	60-51-5	P044
3,3'-Dimethoxybenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-	119-90-4	U091
p-Dimethylaminoazobenzene	Benzenamine, N,N-dimethyl-4-(phenylazo)-	60-11-7	U093
7,12-Dimethylbenz[a] anthracene	Benz[a]anthracene, 7,12-dimethyl	57-97-6	U094

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Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
3,3'-Dimethylbenzidine.....	[1,1'-Biphenyl]-4,4'diamine, 3,3'-dimethyl-.....	119-93-7	U095
Dimethylcarbamoyl chloride..	Carbamic chloride, dimethyl-.....	79-44-7	U097
1,1-Dimethylhydrazine.....	Hydrazine, 1,1-dimethyl-.....	57-14-7	U098
1,2-Dimethylthydrazine.....	Hydrazine, 1,2-dimethyl-.....	540-73-8	U099
alpha, alpha-Dimethyl phenethylamine	Benzene ethanamine, alpha,alpha-dimethyl-.....	122-09-8	P046
2,4-Dimethylphenol.....	Phenol, 2,4-dimethyl-.....	105-67-9	U101
Dimethyl phthalate.....	1,2-Benzenedicarboxylic acid, dimethyl ester.....	131-11-3	U102
Dimethyl sulfate.....	Sulfuric acid, dimethyl ester.....	77-78-1	U103
Dimetilan.....	Carbamic acid, dimethyl-, 1- [(dimethylamino) carbonyl]-5-methyl-1H-pyrazol-3-yl ester.....	644-64-4	P191
Dinitrobenzene, N.O.S[1].....	Benzene, dinitro.....	25154-54-5	.....
4,6-Dinitro-o- cresol.....	Phenol, 2-methyl-4,6-dinitro-.....	534-52-1	P047
4,6-Dinitro-o-cresol salts.....	.....	.....	P047
2,4-Dinitrophenol.....	Phenol, 2,4-dinitro.....	51-28-5	P048
2,4-Dinitrotoluene.....	Benzene, 1-methyl-2,4-dinitro.....	121-14-2	U105
2,6-Dinitrotoluene.....	Benzene, 2-methyl-1,3-dinitro-.....	606-20-2	U106
Dinoseb.....	Phenol, 2-(l-methylpropyl)-4,6-dinitro.....	88-85-7	P020
Di-n-octyl phthalate.....	1,2-Benzenedicarboxylic acid, dioctyl ester.....	117-84-0	U017
Diphenylamine.....	Benzenamine, N-phenyl-.....	122-39-4	.....
1,2-Diphenylhydrazine.....	Hydrazine, 1,2-diphenyl-.....	122-66-7	U109
Di-n-propynitrosamine.....	1-Propanamine, N-nitroso-N-propyl-.....	621-64-7	U111
Disulfiram.....	Thioperoxydicarbonic diamide, tetraethyl.....	97-77-8	U403
Disulfoton.....	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester.....	298-04-4	P039
Dithiobiuret.....	Thiomidodicarbonic diamide.$[(H_2N)C(S)]_2NH$.....	541-53-7	P049
EPTC.....	Carbamothioic acid, dipropyl-, S-ethyl ester.....	759-94-4	U390
Endosulfan.....	6,9-Methano-2,4,3-benzodioxathiepin,6,7,8,9,10, 10-hexachloro-1,5,5a,6,9,9a- hexahydro,3-oxide.....	115-29-7	P050
Endothall.....	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid.....	145-73-3	P088
Endrin.....	2,7:3,6-Dimethanonaphth[2,3-b]oxirene,3,4,5,..... 6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-,(aalpha,2beta,2abeta,3alpha,6alpha, 6abeta,7beta,7aalpha)-	72-20-8	P051
Endrin metabolites.....	.....	.....	P051
Epichlorohydrin.....	Oxirane, (chloromethyl)-.....	106-89-8	U041
Epinephrine.....	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-, (R)-.....	51-43-4	P042
Ethyl carbamate (urethane)..	Carbamic acid, ethyl ester.....	51-79-6	U238
Ethyl cyanide.....	Propanenitrile.....	107-12-0	P101
Ethyl Ziram.....	Zinc, bis-diethylcarbamodithioato-S,S')-.....	14324-55-1	U407
Ethylenebisdithio-carbamic acid,	Carbamodithioic acid, 1,2-ethanediylbis-.....	111-54-6	U114
Ethylenebisdithio-carbamic acid, ... salts and esters	.....	.....	U114
Ethylene dibromide.....	Ethane, 1,2-dibromo-.....	106-93-4	U067
Ethylene dichloride.....	Ethane, 1,2-dichloro-.....	107-06-2	U077
Ethylene glycol monoethyl ether	Ethanol, 2-ethoxy.....	110-80-5	U359
Ethyleneimine.....	Aziridine.....	151-56-4	P054
Ethylene oxide.....	Oxirane.....	75-21-8	U115
Ethylenethiourea.....	2-Imidazolidinethione.....	96-45-7	U116
Ethylidene dichloride.....	Ethane, 1,1-dichloro-.....	75-34-3	U076
Ethyl methacrylate.....	2-Propenoic acid, 2-methyl-, ethyl ester.....	97-63-2	U118
Ethyl methanesulfonate.....	Methanesulfonic acid, ethyl ester.....	62-50-0	U119
Famphur.....	Phosphorothioic acid, O-[4-[(dimethylamino) sulfonyl] phenyl] O,O-dimethyl ester	52-85-7	P097

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Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
Ferbam	Iron, tris(dimethylcarbamodithioat-S,S)-	14484-64-1	U396
Fluoranthene	Same	206-44-0	U120
Fluorine	Same	7782-41-4	P056
Fluoroacetamide	Acetamide, 2-fluoro-	640-19-7	P057
Fluoroacetic acid, sodium salt	Acetic acid, fluoro-, sodium salt	62-74-8	P058
Formaldehyde	Same	50-00-0	U122
Formetanate hydrochloride	Methanimidamide, N,N-dimethyl-N-'[3-[[(methylamino) carbonyl]oxy]phenyl]-, monohydrochloride	23422-53-9	P198
Formic Acid	Same	64-18-6	U123
Formparanate	Methanimidamide, N,N-dimethyl-N'-[2-methyl-.4-[[(methylamino) carbonyl]oxy]phenyl]-	17702-57-7	P197
Glycidylaldehyde	Oxiranecarboxyaldehyde	765-34-4	U126
Halomethanes, N.O.S.[1]	.....	.....	.....
Heptachlor	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-	76-44-8	P059
Heptachlor epoxide	2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6, 7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-, 1aalpha,1bbeta 2alpha, 5alpha 5abeta, 6aalpha)-	1024-57-3	.....
Heptachlor epoxide (alpha,beta and gamma isomers)	.....	.....	.....
Heptachlorodibenzofurans	.....	.....	.....
Heptachlorodibenzo-p-dioxins	.....	.....	.....
Hexachlorobenzene	Benzene, hexachloro-	118-74-1	U127
Hexachlorobutadiene	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87-68-3	U128
Hexachlorocyclopentadiene	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro	77-47-4	U130
Hexachlorodibenzo-p-dioxins	.....	.....	
Hexachlorodibenzofurans	.....	.....	
Hexachloroethane	Ethane, hexachloro-	67-72-1	U131
Hexachlorophene	Phenol, 2,2'-methylenebis[3,4,6-trichloro-	70-30-4	U132
Hexachloropropene	1-Propene, 1,1,2,3,3,3-hexachloro-	1888-71-7	U243
Hexaethyl tetraphosphate	Tetraphosphoric acid, hexaethyl ester	757-58-4	P062
Hydrazine	Same	302-01-2	U133
Hydrogen cyanide	Hydrocyanic acid	74-90-8	P063
Hydrogen fluoride	Hydrofluoric acid	7664-39-3	U134
Hydrogen sulfide	Hydrogen sulfide H_2S	7783-06-4	U135
Indeno[1,2,3cd]pyrene	Same	193-39-5	U137
3-Iodo-2-propynyl n-butylcarbamate	Carbamic acid, butyl-, 3-iodo-2-propynyl ester	55406-53-6	U375
Isobutyl alcohol	1-Propanol, 2-methyl	78-83-1	U140
Isodrin	1,4,5,8-Dimethanonaphthalene,1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-(1alpha, 4alpha,4abeta,5beta,8beta,8abeta)-	465-73-6	P060
Isolan	Carbamic acid, dimethyl-, 3-methyl-1-(1-methylethyl)-1H-pyrazol-5-yl ester	119-38-0	P192
Isosafrole	1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1	U141
Kepone	1,3,4-Metheno-2H-cyclobuta[cd]-pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b,6-decachlorooctahydro-	143-50-0	U142
Lasiocarpine	2-Butenoic acid, 2-methyl-, 7-[[2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy]methyl] -2,3,5,7a-tetrahydro-1H-pyrrolizin-1-yl ester, [1S-[1alpha(Z),7(2S*,3R*),7aalpha]]	303-34-4	4143
Lead	Same	7439-92-1	.....
Lead compounds, N.O.S.[1]	.....	.....	.....
Lead acetate	Acetic acid, lead(2+) salt	301-04-2	U144
Lead phosphate	Phosphoric acid, lead(2+) salt(2:3)	7446-27-7	U145
Lead subacetate	Lead, bis(acetato-O)tetrahydroxtri-	1335-32-6	U146

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Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
Lindane	Cyclohexane, 1,2,3,4,5,6-Hexachloro (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-	58-89-9	U129
MMNG	Guanidine, N-methyl-N'-nitro-N-nitroso	70-25-7	U163
Maleic anhydride	2,5-Furandione	108-31-6	U147
Maleic hydrazide	3,6-Pyridazinedione, 1,2-dihydro,	123-33-1	U148
Malononitrile	Propanedinitrile	109-77-3	U149
Manganese dimethyldithio-carbamate	Manganese, bis(dimethylcarbamodithioato-S,S')-	15339-36-3	P196
Melphalan	L-Phenylalanine, 4-[bis(2-chloroethyl)amino]-	148-82-3	U150
Mercury	Same	7439-97-6	U151
Mercury compounds, N.O.S.[1]	.....	.....	.....
Mercury fulminate	Fulminic acid, mercury(2+) salt	628-86-4	P065
Metam Sodium	Carbamodithioic acid, methyl-, monosodium salt	137-42-8	U384
Methacrylonitrile	2-Propanenitrile, 2-methyl-	126-98-7	U152
Methapyrilene	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl N'-(2-thienylmethyl)	91-80-5	U155
Methiocarb	Phenol, (3,5-dimethyl-4-(methylthio)-, methylcarbamate	2032-65-7	P199
Methomyl	Ethanimidothioic acid, N-[[(methylamino), carbonyl]oxy]-, methyl ester	16752-77-5	P066
Methoxychlor	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis [4-methoxy-	72-43-5	U247
Methyl bromide	Methane, bromo-	74-83-9	U029
Methyl chloride	Methane, chloro-	74-87-3	U045
Methyl chlorocarbonate	Carbonochloridic acid, methyl ester	79-22-1	U156
Methyl chloroform	Ethane, 1,1,1-trichloro-	71-55-6	U226
3-Methylcholanthrene	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	56-49-5	U157
4,4'-Methylenebis(2-chloro-aniline)	Benzenamine, 4,4'-methylenebis[2-chloro-	101-14-4	U158
Methylene bromide	Methane, dibromo-	74-95-3	U068
Methylene chloride	Methane, dichloro-	75-09-2	U080
Methyl ethyl ketone (MEK)	2-Butanone	78-93-3	U159
Methyl ethyl ketone peroxide	2-Butanone, peroxide	1338-23-4	U160
Methyl hydrazine	Hydrazine, methyl	60-34-4	P068
Methyl iodide	Methane, iodo-	74-88-4	U138
Methyl isocyanate	Methane, isocyanato-	624-83-9	P064
2-Methyllactonitrile	Propanenitrile, 2-hydroxy-2-methyl	75-86-5	P069
Methyl methacrylate	2-Propenoic acid, 2-methyl-, methyl ester	80-62-6	U162
Methyl methanesulfonate	Methanesulfonic acid, methyl ester	66-27-3	.....
Methyl parathion	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl)ester	298-00-0	P071
Methylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo	56-04-2	U164
Metolcarb	Carbamic acid, methyl-, 3-methylphenyl ester	1129-41-5	P190
Mexacarbate	Phenol, 4-(dimethylamino)-3,5-dimethyl-, methylcarbamate (ester)	315-18-4	P128
Mitomycin C	Azinino[2',3':3,4]pyrrolo[1,2-a]indole-4, 7-dione,6-amino-8-[[(aminocarbonyl)oxy]methyl]-1,1a,2,8,8a,8b-hexahydro-8a-methoxy-5-methyl-[1aS-(1aalpha,8beta,8aalpha8balpha)]-	50-07-7	U010
Molinate	1H-Azepine-1-carbothioic acid, hexahydro-, S-ethyl ester	2212-67-1	U365
Mustard gas	Ethane, 1,1'-thiobis[2-chloro-	505-60-2	.....
Naphthalene	Same	91-20-3	U165
1,4-Naphthoquinone	1,4-Naphthalenedione	130-15-4	U166
alpha-Naphthylamine	1-Naphthalenamine	134-32-7	U167

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Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
beta-Naphthylamine	2-Naphthalenamine	91-59-8	U168
alpha-Naphthylthiourea	Thiourea, 1-naphthalenyl-	86-88-4	P072
Nickel	Same	7440-02-0	.....
Nickel compounds,N.O.S.[1]	.....	.....	.....
Nickel carbonyl	Nickel carbonyl, $Ni(CN)_4$,(T-4)-	13463-39-3	P073
Nickel cyanide	Nickel cyanide $Ni(CN)_2$	557-19-7	P074
Nicotine	Pyridine, 3-(1-methyl-2-pyrrolidinyl)-,(S)-	54-11-5	P075
Nicotine salts	.....	.....	P075
Nitric oxide	Nitrogen oxide NO	10102-43-9	P076
p-Nitroaniline	Benzenamine, 4-nitro	100-01-6	P077
Nitrobenzene	Benzene, nitro-	98-95-3	U169
Nitrogen dioxide	Nitrogen oxide NO_2	10102-44-0	P078
Nitrogen mustard	Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-	51-75-2	.....
Nitrogen mustard hydro-chloride salt	.....	.....	.....
Nitrogen mustard N-oxide	Ethanamine, 2-chloro-N-(2-chloroethyl)-N-Methyl, N-oxide	126-85-2	.....
Nitrogen mustard, N-oxide, hydrochloride salt	.....	.....	.....
Nitroglycerin	1,2,3-Propanetriol, trinitrate	55-63-0	P081
p-Nitrophenol	Phenol, 4-nitro	100-02-7	U170
2-Nitropropane	Propane, 2-nitro-	79-46-9	U171
Nitrosamines, N.O.S[1]	.....	35576-91-1D	.....
N-Nitrosodi-n-butylamine.	1-Butanamine, N-butyl-N-nitroso-	924-16-3	U172
N-Nitrosodiethanolamine..	Ethanol, 2,2'-(nitrosoimino)bis-	1116-54-7	U173
N-Nitrosodiethylamine.....	Ethanamine, N-ethyl-N-nitroso-	55-18-5	U174
N-Nitrosodimethylamine..	Methanamine, N-methyl-N-nitroso-	62-75-9	P082
N-Nitroso-N-ethylurea.....	Urea, N-ethyl-N-nitroso-	759-73-9	U176
N-Nitrosomethylethylamine..	Ethanamine, N-methyl-N-nitroso	10595-95-6	.....
N-Nitroso-N-methylurea.....	Urea, N-methyl-N-nitroso-	684-93-5	U177
N-Nitroso-N-methylurethane.	Carbamic acid, methylnitroso-, ethyl ester	615-53-2	U178
N-Nitrosomethylvinylamine..	Vinylamine, N-methyl-N-nitroso-	4549-40-0	P084
N-Nitrosomorpholine.....	Morpholine, N-nitroso-	59-89-2	.....
N-Nitrosonornicotine.....	Pyridine, 3-(1-nitroso-2-pyrrolidinyl)-, (S)-	16543-55-8	.....
N-Nitrosopiperidine.....	Piperidine, 1-nitroso-	100-75-4	U179
N-Nitrosopyrrolidine.....	Pyrrolidine, 1-nitroso-	930-55-2	U180
N-Nitrososarcosine.....	Glycine, N-methyl-N-nitroso-	13256-22-9	.....
5-Nitro-o-toluidine.....	Benzenamine, 2-methyl-5-nitro	99-55-8	U181
Octamethylpyrophosphoramide	Diphosphoramide, octamethyl-	152-16-9	P085
Osmium tetroxide	Osmium oxide (OsO_4) (T-4)-	.20616-12-0	P087
Oxamyl	Ethanimidothioc acid, 2-(dimethylamin [[(methylamino)carbonyl)oxy]-2-oxo-, methyl ester	23135-22-0	P194
Paraldehyde	1,3,5-Trioxane, 2,4,6-trimethyl-	123-63-7	U182
Parathion	Phosphorothioic acid, O,O-diethyl O-(4-nitrophenyl) ester	56-38-2	P089
Pebulate	Carbomothioic acid, butylethyl-, S-propyl ester	1114-71-2	U391
Pentachlorobenzene	Benzene, pentachloro-	608-93-5	U183
Pentachlorodibenzo-p-dioxins	.....	.....	.....
Pentachlorodibenzofurans..	.....	.....	.....
Pentachloroethane	Ethane, pentachloro	76-01-7	U184
Pentachloronitrobenzene (PCNB)	Benzene, pentachloronitro	82-68-8	U185

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Pentachlorophenol	Phenol, pentachloro-	87-86-5	See F027
Phenacetin	Acetamide, N-(4-ethoxyphenyl)	62-44-2	U187
Phenol	Same	108-95-3	U188
Phenylenediamine	Benzenediamine	25265-76-3	.....
Phenylmercury acetate	Mercury, (acetato-O)phenyl-	62-38-4	P092
Phenylthiourea	Thiourea, phenyl-	103-85-5	P093
Phosgene	Carbonic dichloride	75-44-5	P095
Phosphine	Same	7803-51-2	P096
Phorate	Phosphorodithioic acid, O,O-diethyl S-[(ethylithio), methyl] ester	298-02-2	P094
Phthalic acid esters, N.O.S.[1]	.....	.....	.....
Phthalic anhydride	1,3-isobenzofurandione	85-44-9	U190
Physostigmine	Pyrrolo[2,3-b]indol-5-01, 1,2,3,3a,8,8a- hexahydro-1,3a8-trimethyl-, methylcarbamate (ester), 3aS-cis)-	57-47-6	P204
Physostigmine Salicylate	Benzoic acid, 2-hydroxy-, compd. with (3aS-cis)- -1,2,3,3a,8,8a-hexahydro-1,3a,8-trimethylpyrrol [2,3-b]indol-5-yl methylcarbamate ester (1:1)	57-47-6	P188
2-Picoline	Pyridine, 2-methyl-	109-06-8	U191
Polychlorinated biphenyls, N.O.S.[1]	.....	.....	.....
Potassium cyanide	Potassium cyanide K(CN)	151-50-8	P098
Potassium dimethyldithio-carbamate	Carbamodithioc acid, dimethyl, potassium salt	128-03-0	U383
Potassium hyroxymethyl-n-methyl-dithiocarbamate	Carbamodithioc acid, methyl-monopotassium salt..	51026-28-9	U378
Potassium n-methyl dithiocarbamate	Carbamodithioc acid, methyl-monopotassium salt	137-41-7	U377
Potassium pentachlorophenate	Pentachlorophenol, potassium salt	7778736	None
Potassium silver cyanide	Argentate(1-), bis(cyano-C)-, potassium	506-61-6	P099
Promecarb	Phenol, 3-methyl-5-(1-methylethyl)-, methyl carbamate	2631-37-0	P201
Pronamide	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	23950-58-5	U192
1,3-Propane sultone	1,2-Oxathiolane, 2,2-dioxide	1120-71-4	U193
Propham	Carbamic acid, phenyl-, 1-methylethyl ester	122-42-9	U373
Propoxur	Phenol, 2-(1-methylethoxy)-, methylcarbamate	114-26-1	U411
Prosulfocarb	Carbamothioic acid, dipropyl-, S-(phenylmethyl) ester		
n-Propylamine	1-Propanamine	107-10-8	U194
Propargyl alcohol	2-Propyn-1-ol	107-19-7	P102
Propylene dichloride	Propane, 1,2-dichloro-	78-87-5	U083
1,2-Proplenimine	Aziridine, 2-methyl-	75-55-8	P067
Propylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-propyl- 2-thioxo-	51-52-5	.....
Pyridine	Same	110-86-1	U196
Reserpine	Yohimban-16-carboxylic acid,11,17-dimethoxy-18- [(3,4,5-trimethoxybenzoyl)oxy]-, smethyl ester. (3beta,16beta,17alpha,18beta,20alpha)-	50-55-5	U200
Resorcinol	1,3-Benzenediol	108-46-3	U201
Saccharin	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide	81-07-2	U202
Saccharin salts	.....	.....	U202
Safrole	1,3-Benzodioxole, 5-(2-propenyl)-	94-59-7	U203
Selenium	Same	7782-49-2	.....

[1] The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.

Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
Selenium compounds,N.O.S.[1]....	.....	.....	
Selenium dioxide.....	Selenious acid.....	7783-00-8	U204
Selenium sulfide.....	Selenium sulfide SeS_2.....	7488-56-4	U205
Selenium, tetrakis..... (dimethyl- dithiocarbamate)	Carbamodithioic acid, dimethyl-, tetraanhydrosulfide with orthothioselenious acid	144-34-3	U376
Selenourea.....	Same.....	630-10-4	P103
Silver.....	Same.....	7440-22-4	.....
Silver compounds, N.O.S.[1]...	.....		
Silver cyanide.....	Silver cyanide Ag(CN).....	506-64-9	P104
Silvex (2,4,5-TP).....	Propanoic acid, 2-2(2,4,5-trichlorophenoxy)-.....	93-72-1	See F027
Sodium cyanide.....	Sodium cyanide Na(CN).....	143-33-9	P106
Sodium dibutyldithio- carbamate.....	Carbamodithioic acid, dibutyl, sodium salt.....	136-30-1	U379
Sodium diethyldithio- carbamate.....	Carbamodithioic acid, diethyl-, sodium salt.....	148-18-5	U381
Sodium dimethyldithio- carbamate.....	Carbamodithioic acid, dimethyl-, sodium salt.....	128-04-1	U382
Sodium penta- chlorophenate.....	Pentachlorophenol, sodium salt.....	131522	None
Streptozotocin.....	D-Glucose, 2-deoxy-2-[[(methylnitrosoamino)..... carbonyl]amino]-.....	18883-66-4	U206
Strychnine.....	Strychnidin-10-one.....	57-24-9	P108
Strychnine salts.....	.....		P108
Sulfallate.....	Carbamodithioic acid, diethyl-, 2-chloro-..... 2-propenyl ester	95-06-7	U277
TCDD.....	Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-.....	1746-01-6	.....
Tetrabutyltyhiuram disulfide.....	Thioperoxydicarbonic diamide, tetrabutyl.....	1634-02-2	U402
Tetrabutylthiuram monosulfide.....	Bis (dimethylthiocarbamoyl) sulfide.....	97-74-5	U401
1,2,4,5-Tetrachlorobenzene.	Benzene, 1,2,4,5-tetrachloro-.....	95-94-3	U207
Tetrachlorodibenzo-p-dioxins	.....	.....	.....
Tetrachlorodibenzofurans..	.....	.....	.....
Tetrachloroethane, N.O.S.[1]..	Ethane, tetrachloro-, N.O.S.	25322-20-7	.....
1,1,1,2-Tetrachloroethane.....	Ethane, 1,1,1,2-tetrachloro-.....	630-20-6	U208
1,1,2,2-Tetrachloroethane.....	Ethane, 1,1,2,2-Tetrachloro.....	79-34-5	U209
Tetrachloroethylene.....	Ethene, Tetrachloro-.....	127-18-4	U210
2,3,4,6-Tetrachlorophenol.....	Phenol, 2,3,4,6-tetrachloro-.....	58-90-2	See F027
2,3,4,6-Tetrachlorophenol,.... potassium salt.....	same.....	53535276	None
2,3,4,6-Tetrachlorophenol,. sodium salt.....	same.....	25567559	None
Tetraethyl- dithiopyrophosphate.....	Thiodiphosphoric acid, tetraethyl ester.....	3689-24-5	P109
Tetraethyl lead.....	Plumbane, tetraethyl-.....	78-00-2	P110
Tetraethyl pyrophosphate....	Diphosphoric acid, tetraethyl ester.....	107-49-3	P111
Tetranitromethane.....	Methane, tetranitro-.....	509-14-8	P112
Thallium.....	Same.....	7440-28-0	.....
Thallium compounds,N.O.S.[1]	.....	.....	.....
Thallic oxide.....	Thallium oxide Tl_2O_3.....	1314-32-5	P113
Thallium (I) acetate.....	Acetic acid, thallium(1+) salt.....	563-68-8	U214
Thallium (I) carbonate.....	Carbonic acid, dithallium(1+) salt.....	6533-73-9	U215
Thallium (I) chloride.....	Thallium chloride.TlCl.....	7791-12-0	U216

[1] The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.

Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
Thallium (I) nitrate	Nitric acid, thallium(1+) salt	10102-45-1	U217
Thallium selenite	Selenious acid, dithallium(1+)salt	12039-52-0	P114
Thallium (I) sulfate	Sulfuric acid, dithallium(1+)salt	7446-18-6	P115
Thioacetamide	Ethanethioamide	62-55-5	U218
Thiodicarb	Ethanimidothioic acid, N,N'-[thiobis [(methylimino) carbonyloxy]] bis-, dimethyl ester	59669-26-0	U410
Thiofanox	2-Butanone, 3,3-dimethyl-1-(methylthio)-, O-[(methylamino)carbonyl]oxime	39196-18-4	P045
Thiomethanol	Methanethiol	74-93-1	U153
Thiophanate-methyl	Carbamic acid, [1,2-phyenylenebis (iminocarbonothioyl)] bis-, dimethyl ester	23564-05-8	U409
Thiophenol	Benzenethiol	108-98-5	P014
Thiosemicarbazide	Hydrazinecarbothioamide	79-19-6	P116
Thiourea	Same	62-56-6	U219
Thiram	Thioperoxydicarbonic diamide, $[(H_2N)C(S)]_2S_2$ tetramethyl-	137-26-8	U244
Tirpate	1,3-Dithiolane-2-carboxaldehyde, 2,4-dimethyl-, O-[(methylamino) carbonyl]	26419-73-8	P185
Toluene	Benzene, methyl-	108-88-3	U220
Toluenediamine	Benzenediamine, ar-methyl-	25376-45-8	U221
Toluene-2,4-diamine	1,3-Benzenediamine, 4-methyl-	95-80-7	.....
Toluene-2,6-diamine	1,3-Benzenediamine, 2-methyl-	823-40-5	.....
Toluene-3,4-diamine	1,2-Benzenediamine, 4-methyl-	496-72-0	.....
Toluene diisocyanate	Benzene, 1,3-diisocyanatomethyl-	26471-62-5	U223
o-Toluidine	Benzenamine, 2-methyl-	95-53-4	U328
o-Toluidine hydrochloride	Benzenamine, 2-methyl-, hydrochloride	636-21-5	U222
p-Toluidine	Benzenamine, 4-methyl	106-49-0	U353
Toxaphene	Same	8001-35-2	P123
Triallate	Carbamothioic acid, bis(1-methylethyl)-, S-(2,3,3-trichloro-2-propenyl) ester	2303-17-5	U389
		.....	.....
1,2,4-Trichlorobenzene	Benzene, 1,2,4-trichloro-	120-82-1	.....
1,1,2-Trichloroethane	Ethane, 1,1,2-trichloro-	79-00-5	U227
Trichloroethylene	Ethene, trichloro-	79-01-6	U228
Trichloromethanethiol	Methanethiol, trichloro-	75-70-7	P118
Trichloro-monofluoromethan	Methane, trichlorofluoro-	75-69-4	U121
2,4,5-Trichlorophenol	Phenol, 2,4, 5-trichloro-	95-95-4	See F027
2,4,6-Trichlorophenol	Phenol, 2,4,6-trichloro-	88-06-2	See F027
2,4,5-T	Acetic acid, (2,4,5-trichlorophenoxy)-	93-76-5	See F027
Trichloropropane, N.O.S[1]	.....	25735-29-9	.....
1,2,3-Trichloropropane	Propane, 1,2,3-trichloro	96-18-4	.....
O,O,O-Triethyl phosphorothioate	Phosphorothioic acid, O,O,O-triethyl ester	126-68-1	.....
Triethylamine	Ethanamine, N,N-diethyl-	121-44-8	U404
1,3,5-Trinitrobenzene	enzene, 1,3,5-trinitro-	99-35-4	U234
Tris(1-aziridinyl)- phosphine.sulfide	Aziridine, 1,1',1"-phosphinothioylidynetris	52-24-4	.....
Tris(2,3-dibromopropyl) phosphate	1-Propanol, 2, 3-dibromo-, phosphate (3:1)	126-72-7	U235
Trypan blue	2,7-Naphthalenedisulfonic acid, 3, 3'[(3,3'- dimethyl[1,1'-biphenyl]-4,4'diyl)bis(azo)]-bis[5-amino-4-hydroxy-,tetrasodium salt.	72-57-1	U236
Uracil mustard	2,4(1H,3H)-Pyrimidinedione, 5-[bis (2-chloroethyl)amino]-	66-75-1	U237
Vanadium pentoxide	Vanadium oxide V_2O_5	1314-62-1	P120
Vinyl chloride	Ethene, chloro-	75-01-4	U043
Vernolate	Carbamothioc acid, dipropyl-, S-propyl ester	1929-77-7	U385

[1] The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.

APPENDIX VIII TO PART 261 HAZARDOUS CONSTITUENTS

Common name	Chemical abstracts name	Chemical.... abstracts No.	Hazardous waste No.
Warfarin.....	2 H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo..... phenylbutyl)-when present at concentrations less than 0.3%.	81-81-2	U248
Warfarin.....	2 H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-..... phenylbutyl)-when present at concentrations greater than 0.3%.	81-81-2	P001
Warfarin salts, when..... present at concentrations less than 0.3%	.....	.....	U248
Warfarin salts, when ..... present at concentrations greater than 0.3%	.....	.....	P001
Zinc cyanide.....	Zinc cyanide Zn $(CN)_2$.....	557-21-1	P121
Zinc phosphide.....	Zinc phosphide Zn_3P_2, when present at..... concentrations greater than 10%.	1314-84-7	P122
Zinc phosphide.....	Zinc phosphide Zn_3P_2, when present at concentrations of 10% or less.....	1314-84-7	U249
Ziram.....Zinc, bis(dimethylcarbamodithioato-S,S')-,..... (T-4)-		137-30-4	P205

[1]The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.

APPENDIX IX TO PART 261 - WASTES EXCLUDED FROM NON-SPECIFIC SOURCES -See 40 CFR.

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. November 19, 1980;
Amended Eff. June 1, 1988; February 1, 1988; December 1, 1987;
August 1, 1987; May 1, 1987; February 1, 1987; October 1, 1986; July 1, 1986;
May 1, 1986; January 1, 1986; October 1, 1985; July 1, 1985; October 1, 1984;
October 1, 1983; October 1, 1982; September 25, 1981.
Transferred and Recodified from 10 NCAC 10F .0029 Eff. April 4, 1990;
Amended Eff. April 1, 1993; February 1, 1992; December 1, 1990; October 1, 1990.

.0107 STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE - PART 262

(a) 40 CFR 262.10 through 262.12 (Subpart A), "General", have been incorporated by reference including subsequent amendments and editions.

SUBPART A - GENERAL

262.10 Purpose, scope, and applicability.

(a) These regulations establish standards for generators of hazardous waste.
(b) 40 CFR 261.5(c) and (d) must be used to determine the applicability of provisions of this part that are dependent on calculations of the quantity of hazardous waste generated per month.
(c) A generator who treats, stores, or disposes of hazardous waste on-site must only comply with the following sections of this part with respect to that waste: Section 262.11 for determining whether or not he has a hazardous waste. Section 262.12 for obtaining an EPA identification number, Section 262.34 for accumulation of hazardous waste, Section 262.40(c) and (d) for recordkeeping, Section 262.43 for additional reporting, and if applicable, Section 262.70 for farmers.
(d) Any person who exports or imports hazardous waste subject to the Federal manifesting requirements of part 262, or subject to the universal waste management standards of 40 CFR Part 273, or subject to State requirements analogous to 40 CFR Part 273, to or from the countries listed in §262.58(a)(1) for recovery must comply with subpart H of this part. **[Editor's Note: Subpart H is located F.R. 4/12/96, 16310-16314], and §§262.80-262.89 will be entered in the rule book, effective 8/1/98..**
(e) Any person who imports hazardous waste into the United States must comply with the standards applicable to generators established in this part.
(f) A farmer who generates waste pesticides which are hazardous waste and who complies with all of the requirements of Section 262.70 is not required to comply with other standards in this Part or 40 CFR Parts 270, 264, 265, or 268 with respect to such pesticides.
(g) A person who generates a hazardous waste as defined by 40 CFR Part 261 is subject to the compliance requirements and penalties prescribed in Section 3008 of the Act if he does not comply with the requirements of this part.
(h) An owner or operator who initiates a shipment of hazardous waste from a treatment, storage, or disposal facility must comply with the generator standards established in this part.
(i) Persons responding to an explosives or munitions emergency in accordance with 40 CFR 264.1(g)(8)(i)(D) or (iv) or 265.1(c)(11)(i)(D) or (iv), and 270.1(c)(3)(i)(D) or (iii) are not required to comply with the standards of this part.

[Note 1: The provisions of Section 262.34 are applicable to the on-site accumulation of hazardous waste by generators. Therefore, the provisions of Section 262.34 only apply to owners or operators who are shipping hazardous waste which they generated at that facility.]

[Note 2: A generator who treats, stores, or disposes of hazardous waste on-site must comply with the applicable standards and permit requirements set forth in 40 CFR parts 264, 265, 266, 268, and 270.]

262.11 Hazardous waste determination.

A person who generates a solid waste, as defined in 40 CFR 261.2, must determine if that waste is a hazardous waste using the following method:
(a) He should first determine if the waste is excluded from regulation under 40 CFR 261.4.
(b) He must then determine if the waste is listed as a hazardous waste in Subpart D of 40 CFR Part 261.

[Note: Even if the waste is listed, the generator still has an opportunity under 40 CFR 260.22 to demonstrate to the Administrator that the waste from his particular facility or operation is not a hazardous waste].

(c) For purposes of compliance with 40 CFR part 268, or if the waste is not listed in subpart D of 40 CFR part 261, the generator must then determine whether the waste is identified in subpart C of 40 CFR part 261 by either:
  (1) Testing the waste according to the methods set forth in Subpart C of 40 CFR Part 261, or according to an equivalent method approved by the Administrator under 40 CFR 260.21; or
  (2) Applying knowledge of the hazard characteristic of the waste in light of the materials or the processes used.
(d) If the waste is determined to be hazardous, the generator must refer to Parts 261, 264, 265, 266, 268, and 273 of this chapter for possible exclusions or restrictions pertaining to management of the specific waste.

262.12 EPA identification numbers.

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

(b) A generator who has not received an EPA identification number may obtain one by applying to the Administrator using EPA form 8700-12. Upon receiving the request the Administrator will assign an EPA identification number to the generator.

(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.

(b) 40 CFR 262.20 through 262.23 (Subpart B), "The Manifest", have been incorporated by reference including subsequent amendments and editions.

SUBPART B - THE MANIFEST

262.20 General requirements.

(a) A generator who transports, or offers for transportation, hazardous waste for offsite treatment, storage, or disposal must prepare a Manifest OMB control number 2050-0039 on EPA form 8700-22, and, if necessary, EPA form 8700-22A, according to the instructions included in the appendix to part 262.
(b) A generator must designate on the manifest one facility which is permitted to handle the waste described on the manifest.
(c) A generator may also designate on the manifest one alternate facility which is permitted to handle his waste in the event an emergency prevents delivery of the waste to the primary designated facility.
(d) If the transporter is unable to deliver the hazardous waste to the designated facility or the alternate facility, the generator must either designate another facility or instruct the transporter to return the waste.
(e) The requirements of this subpart do not apply to hazardous waste produced by generators of greater than 100 kg but less than 1000 kg in a calendar month where:
    (1) The waste is reclaimed under a contractual agreement pursuant to which:
        (i) The type of waste and frequency of shipments are specified in the agreement.
        (ii) The vehicle used to transport the waste to the recycling facility and to deliver regenerated material back to the generator is owned and operated by the reclaimer of the waste; and
    (2) The generator maintains a copy of the reclamation agreement in his files for a period of at least three years after termination or expiration of the agreement.
(f) The requirements of this subpart and §262.32(b) do not apply to the transport of hazardous wastes on a public or private right-of-way within or along the border of contiguous property under the control of the same person, even if such contiguous property is divided by a public or private right-of-way. Notwithstanding 40 CFR 263.10(a), the generator or transporter must comply with the requirements for transporters set forth in 40 CFR 263.30 and 263.31 in the event of a discharge of hazardous waste on a public or private right-of-way.

262.21 Acquisition of manifests.

(a) If the State to which the shipment is manifested (consignment State) supplies the manifest and requires its use, then the generator must use that manifest.
(b) If the consignment State does not supply the manifest, but the State in which the generator is located (generator State) supplies the manifest and requires its use, then the generator must use that State's manifest.
(c) If neither the generator State nor the consignment State supplies the manifest, then the generator may obtain the manifest from any source.

262.22 Number of copies.

The manifest consists of at least the number of copies which will provide the generator, each transporter, and the owner or operator of the designated facility with one copy each for their records and another copy to be returned to the generator.

262.23 Use of the manifest.

(a) The generator must:
    (1) Sign the manifest certification by hand; and
    (2) Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest; and
    (3) Retain one copy, in accordance with Section 262.40(a).
(b) The generator must give the transporter the remaining copies of the manifest.
(c) For shipments of hazardous waste within the United States solely by water (bulk shipments only), the generator must send three copies of the manifest dated and signed in accordance with this section to the owner or operator of the designated facility or the last water (bulk shipment) transporter to handle the waste in the United States if exported by water. Copies of the manifest are not required for each transporter.

(d) For rail shipments of hazardous waste within the United States which originate at the site of generation, the generator must send at least three copies of the manifest dated and signed in accordance with this section to:
   (1) The next non-rail transporter, if any; or
   (2) The designated facility if transported solely by rail; or
   (3) The last rail transporter to handle the waste in the United States if exported by rail.

(e) For shipments of hazardous waste to a designated facility in an authorized State which has not yet obtained authorization to regulate that particular waste as hazardous, the generator must assure that the designated facility agrees to sign and return the manifest to the generator, and that any out-of-state transporter signs and forwards the manifest to the designated facility.

[Note: - See Section 263.20(e) and (f) for special provisions for rail or water (bulk shipment) transporters].

(c) 40 CFR 262.30 through 262.34 (Subpart C), "Pre-Transport Requirements", have been incorporated by reference including subsequent amendments and editions.

SUBPART C - PRE-TRANSPORT REQUIREMENTS

262.30 Packaging.

Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must package the waste in accordance with the applicable Department of Transportation regulations on packaging under 49 CFR Parts 173, 178, and 179.

262.31 Labeling.

Before transporting or offering hazardous waste for transportation off-site, a generator must label each package in accordance with the applicable Department of Transportation regulations on hazardous materials under 49 CFR Part 172.

262.32 Marking.

(a) Before transporting or offering hazardous waste for transportation off-site, a generator must mark each package of hazardous waste in accordance with the applicable Department of Transportation regulations on hazardous materials under 49 CFR Part 172;
(b) Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must mark each container of 110 gallons or less used in such transportation with the following words and information displayed in accordance with the requirements of 49 CFR 172.304:

> 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.

Before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must placard or offer the initial transporter the appropriate placards according to Department of Transportation regulations for hazardous materials under 49 CFR Part 172, Subpart F.

262.34 Accumulation time.

(a) Except as provided in paragraphs (d), (e), and (f) of this section, a generator may accumulate hazardous waste on-site for 90 days or less without a permit or without having interim status, provided that:
  (1) The waste is placed in:
    (i) In containers and the generator complies with subparts I of 40 CFR part 265; and/or
    (ii) In tanks and the generator complies with subpart J of 40 CFR part 265, except §§265.197(c) and 265.200; and/or
    (iii) on drip pads and the generator complies with subpart W of 40 CFR part 265 and maintains the following records at the facility:
      (A) A description of procedures that will be followed to ensure that all wastes are removed from the drip pad and associated collection system at least once every 90 days; and
      (B) Documentation of each waste removal, including the quantity of waste removed from the drip pad and the sump or collection system and the date and time of removal; and/or
    (iv) The waste is placed in containment buildings and the generator complies with subpart DD of 40 CFR part 265, has placed its professional engineer certification that the building complies with the design standards specified in 40 CFR 265.1101 in the facility's operating record no later than 60 days after the date of initial

operation of the unit. After February 18, 1993, PE certification will be required prior to operation of the unit. The owner or operator shall maintain the following records at the facility:

(A) A written description of procedures to ensure that each waste volume remains in the unit for no more than 90 days, a written description of the waste generation and management practices for the facility showing that they are consistent with respecting the 90 day limit, and documentation that the procedures are complied with; or

(B) Documentation that the unit is emptied at least once every 90 days. In addition, such a generator is exempt from all the requirements in subparts G and H of 40 CFR part 265, except for Sectiona 265.111 and 265.114.

(2) The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container.

(3) While being accumulated on-site, each container and tank is labeled or marked clearly with the words, "Hazardous Waste"; and

(4) The generator complies with the requirements for owners or operators in Subparts C and D in 40 CFR Part 265, with Section 265.16, and with 40 CFR 268.7(a)(4).

(b) A generator who accumulates hazardous waste for more than 90 days is an operator of a storage facility and is subject to the requirements of 40 CFR Parts 264 and 265 and the permit requirements of 40 CFR Part 270 unless he has been granted an extension to the 90-day period. Such extension may be granted by EPA if hazardous wastes must remain on-site for longer than 90 days due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to 30 days may be granted at the discretion of the Regional Administrator on a case-by-case basis.

(c) (1) A generator may accumulate as much as 55 gallons of hazardous waste or one quart of acutely hazardous waste listed in 261.33(e) in containers at or near any point of generation where wastes initially accumulate, which is under the control of the operator of the process generating the waste, without a permit or interim status and without complying with paragraph (a) of this section provided he:

(i) Complies with Sections 265.171, 265.172, and 265.173(a) of this chapter; and

(ii) Marks his containers either with the words "Hazardous Waste" or with other words that identify the contents of the containers.

(2) A generator who accumulates either hazardous waste or acutely hazardous waste listed in Section 261.33(e) in excess of the amounts listed in paragraph (c)(1) of this section at or near any point of generation must, with respect to that amount of excess waste, comply within three days with paragraph (a) of this section or other applicable provisions of this chapter. During the three day period the generator must continue to comply with paragraphs (c)(1)(i)-(ii) of this section. The generator must mark the container holding the excess accumulation of hazardous waste with the date the excess amount began accumulating.

(d) A generator who generates greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month may accumulate hazardous waste on-site for 180 days or less without a permit or without having interim status, provided that:

(1) The quantity of waste accumulated on-site never exceeds 6000 kilograms:

(2) The generator complies with the requirements of Subpart I of part 265 of this chapter, except for Sections 265.176 and 265.178;

(3) The generator complies with the requirements of Section 265.201 in Subpart J of Part 265; and

(4) The generator complies with the requirements of paragraphs (a)(2) and (a)(3) of this section, the requirements of subpart C of part 265, the requirements of 40 CFR 268.7(a)(4); and

(5) The generator complies with the following requirements:

(i) At all times there must be at least one employee either on the premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures specified in paragraph (d)(5)(iv) of this section. This employee is the emergency coordinator.

(ii) The generator must post the following information next to the telephone:

(A) The names and telephone number of the emergency coordinator.

(B) Location of fire extinguishers and spill control material and, if present, fire alarm; and

(C) The telephone number of the fire department unless the facility has a direct alarm.

(iii) The generator must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relevant to their responsibilities during normal facility operations and emergencies:

(iv) The emergency coordinator or his designee must respond to any emergencies that arise. The applicable responses are as follows:

(A) In the event of a fire, call the fire department or attempt to extinguish it using a fire extinguisher;

(B) In the event of a spill, contain the flow of hazardous waste to the extent possible and, as soon as is practicable, clean up the hazardous waste and any contaminated materials or soil;

(C) In the event of a fire, explosion, or other release which could threaten human health outside the facility or when the generator has knowledge that a spill has reached surface water, the generator must immediately notify the National Response Center (using their 24-hour toll free number 800/424-8802). The report must include the following information:

(1) The name, address, and U.S. EPA Identification Number of the generator;
(2) Date, time, and type of incident (e.g., spill or fire);
(3) Quantity and type of hazardous waste involved in the incident;
(4) Extent of injuries, if any; and
(5) Estimated quantity and disposition of recovered materials, if any.

(e) A generator who generates greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month and who must transport his waste, or offer his waste for transportation, over a distance of 200 miles or more for off-site treatment, storage or disposal may accumulate hazardous waste on-site for 270 days or less without a permit or without having interim status provided that he complies with the requirements of paragraph (d) of this section.

(f) A generator who generates greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month and who accumulates hazardous waste in quantities exceeding 6000 kg or accumulates hazardous waste for more than 180 days (or for more than 270 days if he must transport his waste, or offer his waste for transportation, over a distance of 200 miles or more) is an operator of a storage facility and is subject to the requirements of 40 CFR Parts 264 and 265 and the permit requirements of 40 CFR Part 270 unless he has been granted an extension to the 180-day (or 270-day if applicable) period. Such extension may be granted by EPA if hazardous wastes must remain on-site for longer than 180 days (or 270 days as applicable) due to unforseen, temporary, and uncontrollable circumstances. An extension of up to 30 days may be granted at the discretion of the Regional Administrator on a case-by-case basis.

(d) 40 CFR 262.40 through 262.44 (Subpart D), "Recordkeeping and Reporting", have been incorporated by reference including subsequent amendments and editions. In addition, a generator shall keep records of inspections and results of inspections required by Section 262.34 for at least three years from the date of the inspection.

SUBPART D - RECORDKEEPING AND REPORTING

262.40 Recordkeeping.

(a) A generator must keep a copy of each manifest signed in accordance with Section 262.23(a) for three years or until he receives a signed copy from the designated facility which received the waste. This signed copy must be retained as a record for at least three years from the date the waste was accepted by the initial transporter.
(b) A generator must keep a copy of each Biennial Report and Exception Report for a period of at least three years from the due date of the report.
(c) A generator must keep records of any test results, waste analyses, or other determinations made in accordance with Section 262.11 for at least three years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal.
(d) The periods or retention referred to in this section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

262.41 Biennial Report.

(a) A generator who ships any hazardous waste off-site to a treatment, storage or disposal facility within the United States must prepare and submit a single copy of a Biennial Report to the Regional Administrator by March 1 of each even numbered year. The Biennial Report must be submitted on EPA Form 8700-13A, must cover generator activities during the previous year, and must include the following information:
  (1) The EPA identification number, name, and address of the generator;
  (2) The calendar year covered by the report;
  (3) The EPA identification number, name, and address for each off-site treatment, storage, or disposal facility in the United States to which waste was shipped during the year:
  (4) The name and EPA identification number of each transporter used during the reporting year for shipments to a treatment, storage or disposal facility within the United States;
  (5) A description, EPA hazardous waste number (from 40 CFR Part 261, Subpart C or D), DOT hazard class, and quantity of each hazardous waste shipped off-site for shipments to a treatment, storage or disposal facility within the United States. This information must be listed by EPA identification number of each such off-site facility to which waste was shipped.
  (6) A description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated.
  (7) A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for years prior to 1984.
  (8) The certification signed by the generator or authorized representative.
(b) Any generator who treats, stores or disposes of hazardous on-site must submit a biennial report covering those waste in accordance with the provisions of 40 CFR parts 270, 264, 265, and 266. Reporting for exports of hazardous waste is not required on the Biennial Report form. A separate annual report requirement is set forth at 40 CFR 262.56.

262.42 Exception reporting.

(a) (1) A generator of greater than 1000 kilograms of hazardous waste in a calendar month who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 35 days of the date the waste was accepted by the initial transporter and/or the owner or operator of the designated facility to determine the status of the hazardous waste.
  (2) A generator of greater than 1000 kilograms of hazardous waste in a calendar month must submit an Exception Report to the EPA Regional Administrator for the Region in which the generator is located if he has not received a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 45 days of the date the waste was accepted by the initial transporter.
  The Exception Report must include:
    (i) A legible copy of the manifest for which the generator does not have confirmation of delivery;

(ii) A cover letter signed by the generator or his authorized representative explaining the efforts taken to locate the hazardous waste and the results of those efforts.

(b) A generator of greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month who does not receive a copy of the manifest with the handwritten signature of the owner or operator of the designated facility within 60 days of the date the waste was accepted by the initial transporter must submit a legible copy of the manifest, with some indication the generator has not received confirmation of delivery, to the EPA Regional Administrator for the Region in which the generator is located.

[**Note:** The submission to EPA need only be a handwritten or typed note on the manifest itself, or on an attached sheet of paper, stating that the return copy was not received.]

262.43 Additional reporting.

The Administrator, as he deems necessary under Section 2002(a) and Section 3002(6) of the Act, may require generators to furnish additional reports concerning the quantities and disposition of wastes identified or listed in 40 CFR Part 261.

262.44 Special requirements for generators of between 100 and 1000 kg/mo.

A generator of greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month is subject only to the following requirements in this subpart:

(a) Section 262.40(a), (c), and (d), recordkeeping;
(b) Section 262.42(b), exception reporting; and
(c) Section 262.43, additional reporting.

(e) 40 CFR 262.50 through 262.58 (Subpart E), "Exports of Hazardous Waste", have been incorporated by reference including subsequent amendments and editions.

SUBPART E - EXPORTS OF HAZARDOUS WASTE

262.50 Applicability.

This subpart establishes requirements applicable to exports of hazardous waste. Except to the extent 262.58 provides otherwise, a primary exporter of hazardous waste must comply with the special requirements of this subpart and a transporter transporting hazardous waste for export must comply with applicable requirements of Part 263. Section 262.58 sets forth the requirements of international agreements between the United States and receiving countries which establish different notice, export, and enforcement procedures for the transportation, treatment, storage and disposal of hazardous waste for shipments between the United States and those countries.

262.51 Definitions.

In addition to the definitions set forth at 40 CFR 260.10, the following definitions apply to this subpart:

"Consignee" means the ultimate treatment, storage or disposal facility in a receiving country to which the hazardous waste will be sent.

"EPA Acknowledgment of Consent" means the cable sent to EPA from the U.S. Embassy in a receiving country that acknowledges the written consent of the receiving country to accept the hazardous waste and describes the terms and conditions of the receiving country's consent to the shipment.

"Primary Exporter" means any person who is required to originate the manifest for a shipment of hazardous waste in accordance with 40 CFR Part 262, Subpart B, or equivalent State provision, which specifies a treatment, storage, or disposal facility in a receiving country as the facility to which the hazardous waste will be sent and any intermediary arranging for the export.

"Receiving country" means a foreign country to which a hazardous waste is sent for the purpose of treatment, storage or disposal (except short-term storage incidental to transportation).

"Transit country" means any foreign country, other than a receiving country, through which a hazardous waste is transported.

262.52 General requirements.

Exports of hazardous waste are prohibited except in compliance with the applicable requirements of this subpart and Part 263. Exports of hazardous waste are prohibited unless:

(a) Notification in accordance with 262.53 has been provided;
(b) The receiving country has consented to accept the hazardous waste;
(c) A copy of the EPA Acknowledgment of Consent to the shipment accompanies the hazardous waste shipment and, unless exported by rail, is attached to the manifest [or shipping paper for exports by water (bulk shipment)].
(d) The hazardous waste shipment conforms to the terms of the receiving country's written consent as reflected in the EPA Acknowledgment of Consent.

262.53 Notification of intent to export.

(a) A primary exporter of hazardous waste must notify EPA of an intended export before such waste is scheduled to leave the United States. A complete notification should be submitted sixty (60) days before the initial shipment is intended to be shipped off site. This notification may cover export activities extending over a twelve (12) month or lesser period. The notification must be in writing, signed by the primary exporter, and include the following information:
    (1) Name, mailing address, telephone number and EPA ID number of the primary exporter;

(2) By consignee, for each hazardous waste type:
  (i) A description of the hazardous waste and the EPA hazardous waste number [from 40 CFR Part 261, Subparts C and D], U.S. DOT proper shipping name hazard class and ID number [UN/NA] for each hazardous waste as identified in 49 CFR Part 171-177;
  (ii) The estimated frequency or rate at which such waste is to be exported and the period of time over which such waste is to be exported;
  (iii) The estimated total quantity of the hazardous waste in units as specified in the instructions to the Uniform Hazardous Waste Manifest Form (8700-22);
  (iv) All points of entry to and departure from each foreign country through which the hazardous waste will pass;
  (v) A description of the means by which each shipment of the hazardous waste will be transported [e.g., mode of transportation vehicle (air, highway, rail, water, etc.), type(s) of container (drums, boxes, tanks, etc.)];
  (vi) A description of the manner in which the hazardous waste will be treated, stored or disposed of in the receiving country [e.g., land or ocean incineration, other land disposal, ocean dumping, recycling];
  (vii) The name and site address of the consignee and any alternate consignee; and
  (viii) The name of any transit countries through which the hazardous waste will be sent and a description of the approximate length of time the hazardous waste will remain in such country and the nature of its handling while there;

(b) Notifications submitted by mail should be sent to the following mailing address: Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting, and Data Division (2222A), Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. Hand-delivered notifications should be sent to: Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting, and Data Division (2222A), Environmental Protection Agency, Ariel Rios Bldg., 12th St. and Pennsylvania Ave., NW., Washington, DC. In both cases, the following shall be prominently displayed on the front of the envelope: "Attention: Notification of Intent to Export."

(c) Except for changes to the telephone number in paragraph (a)(1) of this section, changes to paragraph (a)(2)(v) of this section and decreases in the quantity indicated pursuant to paragraph (a)(2)(iii) of this section when the conditions specified on the original notification change [including any exceedance of the estimate of the quantity of hazardous waste specified in the original notification], the primary exporter must provide EPA with a written renotification of the change. The shipment cannot take place until consent of the receiving country to the changes [except for changes to paragraph (a)(2)(viii) of this section and in the ports of entry to and departure from transit countries pursuant to paragraph (a)(2)(iv) of this section] has been obtained and the primary exporter receives an EPA Acknowledgment of Consent reflecting the receiving country's consent to the changes.

(d) Upon request by EPA, a primary exporter shall furnish to EPA any additional information which a receiving country requests in order to respond to a notification.

(e) In conjunction with the Department of State, EPA will provide a complete notification to the receiving country and any transit countries. A notification is complete when EPA receives a notification which EPA determines satisfies the requirements of paragraph (a) of this section. Where a claim of confidentiality is asserted with respect to any notification information required by paragraph (a) of this section, EPA may find the notification not complete until any such claim is resolved in accordance with 40 CFR 260.2.

(f) Where the receiving country consents to the receipt of the hazardous waste, EPA will forward an EPA Acknowledgment of Consent to the primary exporter for purposes of 262.54(h). Where the receiving country objects to receipt of the hazardous waste or withdraws a prior consent, EPA will notify the primary exporter in writing. EPA will also notify the primary exporter of any responses from transit countries.

262.54 Special manifest requirements.

A primary exporter must comply with the manifest requirements of 40 CFR 262.20-262.23 except that:

(a) In lieu of the name, site address and EPA ID number of the designated permitted facility, the primary exporter must enter the name and site address of the consignee;

(b) In lieu of the name, site address and EPA ID number of a permitted alternate facility, the primary exporter may enter the name and site address of any alternate consignee;

(c) In Special handling Instructions and Additional Information, the primary exporter must identify the point of departure from the United States;

(d) The following statement must be added to the end of the first sentence of the certification set forth in Item 16 of the Uniform Hazardous Waste Manifest Form: "and conforms to the terms of the attached EPA Acknowledgment of Consent;"

(e) In lieu of the requirements of 262.21, the primary exporter must obtain the manifest form from the primary exporter's State if that State supplies the manifest form and requires its use. If the primary export's State does not supply the manifest form, the primary exporter may obtain a manifest form 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 [as defined in 40 CFR 264.72(a)] between the manifest and the shipment. A copy of the manifest signed by such facility may be used to confirm delivery of the hazardous waste.

(g) In lieu of the requirements of 262.20(d), where a shipment cannot be delivered for any reason to the designated or alternate consignee, the primary exporter must:
  (1) Re-notify EPA of a change in the conditions of the original notification to allow shipment to a new consignee in accordance with 262.53(c) and obtain an EPA Acknowledgment of Consent prior to delivery; or
  (2) Instruct the transporter to return the waste to the primary exporter in the United States or designate another facility within the United States; and
  (3) Instruct the transporter to 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 shipment to the manifest which must accompany the hazardous waste shipment. For exports by rail or water [bulk shipment], the primary exporter must provide the transporter with an EPA Acknowledgment of Consent which must accompany the hazardous waste but which need not be attached to the manifest except that for exports by water [bulk shipment] the primary exporter must attach the copy of the EPA Acknowledgment of Consent to the shipping paper.

(i) The primary exporter shall 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 in accordance with 263.20(g)(4).

262.55 Exception reports.

In lieu of the requirements of 262.42, 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 United States within forty-five (45) days from the date it was accepted by the initial transporter:

(b) Within ninety (90) days from the date the waste was accepted by the initial transporter, the primary exporter has not received written confirmation from the consignee that the hazardous waste was received;

(c) The waste is returned to the United States.

262.56 Annual reports.

(a) Primary exporters of hazardous waste shall file with the Administrator no later than March 1 of each year, a report summarizing the types, quantities, frequency, and ultimate destination of all hazardous waste exported during the previous calendar year. Such reports shall include the following:
  (1) The EPA identification number, name, and mailing 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 [from 40 CFR Part 261, Subpart C or D], DOT hazard class, the name and US EPA ID number [where applicable] for each transporter used, the total amount of waste shipped and number of shipments pursuant to each notification;
  (5) Except for hazardous waste produced by exporters of greater than 100 kg but less than 1000 kg in a calendar month, unless provided pursuant to 262.41, in even numbered years.
    (i) A description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated; and
    (ii) A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for years prior to 1984.
  (6) A certification signed by the primary exporter which states:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment."

(b) Annual reports submitted by mail should be sent to the following mailing address: Office of Enforcement and compliance Assurance, Office of Compliance, Enforcement Planning, Targeting, and Data Division (2222A), Environmental Protection Agency, 401 M St., SW., Washington, DC 20460. Hand-delivered reports should be sent to Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting, and Data Division (2222A), Environmental Protection Agency, Ariel Rios Bldg., 12th St. and Pennsylvania Ave., NW., Washington, DC.

262.57 Recording.

(a) For all exports a primary exporter must:
  (1) Keep a copy of each notification of intent to export for a period of at least three years from the date the hazardous waste was accepted by the initial transporter;
  (2) Keep a copy of each EPA Acknowledgment of Consent for a period of at least three years from the date the hazardous waste was accepted by the initial transporter;
  (3) Keep a copy of each confirmation of delivery of the hazardous waste from the consignee for at least three years from the date the hazardous waste was accepted by the initial transporter; and
  (4) Keep a copy of each annual report for a period of at least three years from the due date of the report.

(b) The periods of retention referred to in this section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

262.58 International agreements.

(a) Any person who exports or imports hazardous waste subject to Federal manifest requirements of Part 262, or subject to the universal waste management standards of 40 CFR Part 273, or subject to State requirements analogous to 40 CFR Part 273, to or from designated member countries of the Organization for Economic Cooperation and Development (OECD) as defined in paragraph (a)(1) of this section for purposes of recovery is subject to Subpart H of this part. The requirements of Subparts E and F do not apply.
  (1) For the purposes of this Subpart, the designated OECD countries consist of Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States.
  (2) For the purposes of this Subpart, Canada and Mexico are considered OECD member countries only for the purpose of transit.

(b) Any person who exports hazardous waste to or imports hazardous waste from: a designated OECD member country for purposes other than recovery (e.g., incineration, disposal). Mexico (for any purpose), or Canada (for any purpose) remains subject to the requirements of subparts E and F of this part.

(f) 40 CFR 262.60 (Subpart F), "Imports of Hazardous Waste", has been incorporated by reference including subsequent amendments and editions.

SUBPART F - IMPORTS OF HAZARDOUS WASTE

262.60 Imports of hazardous waste.

(a) Any person who imports hazardous waste from a foreign country into the United States must comply with the requirements of this part and the special requirements of this subpart.

(b) When importing hazardous waste, a person must meet all the requirements of 262.20(a) for the manifest except that:

(1) In place of the generator's name, address and EPA identification number, the name and address of the foreign generator and the importer's name, address and EPA identification number must be used.

(2) In place of the generator's signature on the certification statement, the U.S. importer or his agent must sign and date the certification and obtain the signature of the initial transporter.

(c) A person who imports hazardous waste must obtain the manifest form from the consignment State if the State supplies the manifest and requires its use. If the consignment State does not supply the manifest form, then the manifest form may be obtained from any source.

(g) 40 CFR 262.70 (Subpart G), "Farmers" has been incorporated by reference including subsequent amendments and editions.

SUBPART G - FARMERS

262.70 Farmers.

A farmer disposing of waste pesticides from his own use which are hazardous wastes is not required to comply with the standards in this part or other standards in 40 CFR Parts 264, 265, 268, or 270 for those wastes provided he triple rinses each emptied pesticide container in accordance with 261.7(b)(3) and disposes of the pesticide residues on his own farm in a manner consistent with the disposal instructions on the pesticide label.

(h) The Appendix to 40 CFR Part 262 has been incorporated by reference including subsequent amendments and editions; however, Items D, F, H, and I on the form in the Appendix to 40 CFR Part 262 are required to be completed on the North Carolina Hazardous Waste Manifest form.

NORTH CAROLINA HAZARDOUS WASTE MANIFEST

Please print or type. *(Form designed for use on elite (12-pitch) typewriter.)*

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. | Manifest Document No.

2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

A. State Manifest Document Number

B. State Generator's ID

5. Transporter 1 Company Name | 6. US EPA ID Number

C. State Transporter's ID

7. Transporter 2 Company Name | 8. US EPA ID Number

D. Transporter's Phone

E. State Transporter's ID

9. Designated Facility Name and Site Address | 10. US EPA ID Number

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone

11. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a.					
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above.

15. Special Handling Instructions and Additional Information

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; **OR**, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

GENERATOR

Printed/Typed Name | Signature | Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name | Signature | Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

TRANSPORTER

Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

FACILITY

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name | Signature | Month Day Year

EPA Form 8700-22 (Rev. 11-88) Previous editions are obsolete.

INSTRUCTIONS ON BACK SHEET

INSTRUCTIONS FOR COMPLETING THE MANIFEST

U. S. EPA FORM 8700-22 Read all instructions before completing this form. This form has been designed for use on a 12-pitch (elite) typewriter; a firm point pen may be used--press down hard.

FEDERAL REGULATIONS REQUIRE GENERATORS AND TRANSPORTERS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES TO USE THIS FORM (8700-22) AND, IF NECESSARY, THE CONTINUATION SHEET (FORM 8700-22A) FOR BOTH INTER AND INTRASTATE TRANSPORTATION.

FEDERAL REGULATIONS ALSO REQUIRE GENERATORS AND TRANSPORTERS OF HAZARDOUS WASTE AND OWNERS OR OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE AND DISPOSAL FACILITIES TO COMPLETE THE FOLLOWING INFORMATION:

* * * * * * * * * * * * * *

GENERATORS

Item 1. GENERATOR'S U.S.EPA ID NO. MANIFEST DOCUMENT NUMBER

Enter the generator's U.S. EPA twelve digit identification number and the unique five digit number assigned to this Manifest (e.g., 00001) by the generator.

Item 2. PAGE 1 OF--------

Enter the total number of pages used to complete this Manifest, i.e., the first page (EPA Form 8700-22) plus the number of Continuation Sheets (EPA Form 8700-22A), if any.

Item 3. GENERATOR'S NAME AND MAILING ADDRESS

Enter the name and mailing address of the generator. The address should be the location that will manage the returned Manifest forms.

Item 4. GENERATOR'S PHONE NUMBER

Enter a telephone number where an authorized agent of the generator may be reached in the event of an emergency.

Item 5. TRANSPORTER 1 COMPANY NAME

Enter the company name of the first transporter who will transport the waste.

Item 6. U.S. EPA ID NUMBER

Enter the U.S. EPA twelve digit identification number of the first transporter identified in item 5.

Item 7. TRANSPORTER 2 COMPANY NAME

..If applicable, enter the company name of the second transporter who will transport the waste. If more than two transporters are used to transport the waste, use a Continuation Sheet(s) EPA Form 8700-22A) and list the transporters in the order they will be transporting the waste.

Item 8. U.S. EPA ID NUMBER

If applicable, enter the U.S. EPA twelve digit identification number of the second transporter identified in item 7

NOTE: If more than two transporters are used, enter each additional transporter's company name and U.S. EPA twelve digit identification number in items 24-27 on the Continuation Sheet (EPA Form 8700-22A). Each Continuation Sheet has space to record two additional transporters. Every transporter used between the generator and the designated facility must be listed.

Item 9. DESIGNATED FACILITY NAME AND SITE ADDRESS

Enter the company name and site address of the facility designated to receive the waste listed on this Manifest. The address must be the site address, which may differ from the company mailing address.

Item 10. U.S. EPA ID NUMBER

Enter the U.S. EPA twelve digit identification number of the designated facility identified in item 9.

Item 11. U.S. DOT DESCRIPTION [INCLUDING PROPER SHIPPING NAME HAZARD CLASS, AND ID NUMBER (UN/NA)]

Enter the U.S. DOT Proper Shipping Name, Hazard Class, and ID Number (UN/NA) for each waste as identified in 49 CFR 171 through 177.

NOTE: If additional space is needed for waste descriptions, enter these additional descriptions in item 29 on the Continuation Sheet (EPA Form 8700-22A).

Item 12. CONTAINERS [NUMBER AND TYPE]

Enter the number of containers for each waste and the appropriate abbreviation from Table 1 (below) for the type of container.

Table 1---Types of Containers

DM = Metal drums, barrels, kegs
DW = Wooden drums, barrels, kegs
DF = Fiberboard or plastic drums, barrels, kegs
TP = Tanks portable
TT = Cargo tanks (tank trucks)...
TC = Tank cars
DT = Dump truck CY = Cylinders
CM = Metal boxes, cartons, cases (including roll-offs)
CW = Wooden boxes, cartons, cases
CF = Fiber or plastic boxes, cartons, cases
BA = Burlap, cloth, paper or plastic bags

Item 13. TOTAL QUANTITY

Enter the total line quantity of waste described on each line.

Item 14. UNIT [WEIGHT/VOLUME]

Enter the appropriate abbreviation from Table II below for the unit of measure.

Table II -- Units of Measure

G = Gallons (liquids only)
P = Pounds
T = Tons (2000 lbs.)
Y = Cubic yards
L = Liters (liquids only)
K = Kilograms
M = Metric tons (1000 kg)
N = Cubic meters

Item 15. SPECIAL HANDLING INSTRUCTIONS AND ADDITIONAL INFORMATION

Generators may use this space to indicate special transportation, treatment, storage, or disposal information or Bill of Lading information. For international shipments, generators must enter in this space the point of departure (City and State) for those shipments destined for treatment, storage, or disposal outside the jurisdiction of the United States.

Item 16. GENERATOR'S CERTIFICATION

..The generator must read, sign (by hand), and date the certification statement. If a mode other than highway is used, the word "highway" should be lined out and the appropriate mode (rail, water, or air) inserted in the space below. If another mode in addition to the highway mode is used, enter the appropriate mode (e.g., and rail) in the space below.

Primary exporters shipping hazardous wastes to a facility located outside of the United States must add to the end of the first sentence of the certification the following words "and conforms to the terms of the EPA Acknowledgement of Consent to the shipment."

In signing the waste minimization certification statement, those generators who have not been exempted by stature or regulation from the duty to make a waste minimization certification under section 3002(b) of RCRA are also certifying that they have complied with the waste minimization requirements.

Generators may preprint the words, "on behalf of" in the signature block or may hand write this statement in the signature block prior to signing the generator certifications.

NOTE: All of the above information except the handwritten signature required in Item 16 may be preprinted.

BURDEN DISCLOSURE STATEMENT

Public reporting burden for this collection of information is estimated to average: 37 minutes for generators, 15 minutes for transporters, and 10 minutes for treatment, storage and disposal facilities. This includes time for reviewing instructions, gathering data, and completing and reviewing the form. Send comments regarding the burden estimate, including suggestions for reducing this burden, to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

TRANSPORTERS

Item 17. TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

Enter the name of the person accepting the waste on behalf of the first transporter. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

Item 18. TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

Enter, if applicable, the name of the person accepting the waste on behalf of the second transporter. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

NOTE: International Shipments-Transporter Responsibilities. Exports --Transporters must sign and enter the date the waste left the United States in item 15 of Form 8700-22. Imports --Shipments of hazardous waste regulated by RCRA and transported into the United States from another country must upon entry be accompanied by the U.S. EPA Uniform Hazardous Waste Manifest. Transporters who transport hazardous waste into the United States from another country are responsible for completing the Manifest (40 CFR 263.10(c)(1).

OWNERS, AND OPERATORS OF TREATMENT, STORAGE, OR DISPOSAL FACILITIES

Item 19. DISCREPANCY INDICATION SPACE

The authorized representative of the designated (or alternate) facility's owner or operator must note in this space any significant discrepancy between the waste described on the Manifest and the waste actually received at the facility.

Owners and operators of facilities located in North Carolina should contact the Hazardous Waste Section of DEHNR for information on State Discrepancy Reports requirements.

Item 20. FACILITY OWNER OR OPERATOR: CERTIFICATION OF RECEIPT OF HAZARDOUS MATERIALS COVERED BY THIS MANIFEST EXCEPT AS NOTED IN ITEM 19.

Print or type the name of the person accepting the waste on behalf of the owner or operator of the facility. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

Items A-K are not required by Federal Regulations for intra- or interstate transportation. However, States may require generators and owners or operators of treatment, storage, or disposal facilities to complete some or all of items A-K as part of State manifest reporting requirements. Generators and owners and operators of treatment, storage, or disposal facilities are advised to contact State officials for guidance on completing shaded areas of the Manifest.

The North Carolina Commission for Health Services has adopted rules requiring the completion of item D., F., H., and I.

Item D., F., and H. are self explanatory.

Item I. WASTE NUMBER: See Federal Register 40 CFR part 261, Subpart D. For unlisted hazardous waste, enter the description which you believe best describes the waste. A waste may include more than one code number.

EMERGENCY NUMBER'S
National Response Center:
1-800-424-8802
N.C. Highway Patrol Center:
1-800-662-7956

EXAMPLE:

US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS AND ID NO.)	12. CONTAINERS		13. TOTAL QUANTITY	14. UNIT EIGHT/VOLUME	WASTE NUMBER
	NUMBER	TYPE			
Waste Acetone, Flammable Liquid (UN 1090)	10	DM	4500	P	U002

For Additional Information:
CONTACT MANIFEST SYSTEMS
HAZARDOUS WASTE SECTION
WASTE MANAGEMENT DIVISION
DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES
P.O. BOX 29603, RALEIGH, N.C. 27611-7687
(919) 733-2178

NORTH CAROLINA HAZARDOUS WASTE MANIFEST

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST *(Continuation Sheet)*	21. Generator's US EPA ID No.	Manifest Document No.	22. Page	Information in the shaded areas is not required by Federal law.

23. Generator's Name	L. State Manifest Document Number
	M. State Generator's ID
24. Transporter ____ Company Name / 25. US EPA ID Number	N. State Transporter's ID
	O. Transporter's Phone
26. Transporter ____ Company Name / 27. US EPA ID Number	P. State Transporter's ID
	Q. Transporter's Phone

GENERATOR

28. US DOT Description *(Including Proper Shipping Name, Hazard Class, and ID Number)*	29. Containers No.	Type	30. Total Quantity	31. Unit Wt./Vol.	R. Waste No.
a.					
b.					
c.					
d.					
e.					
f.					
g.					
h.					
i.					

S. Additional Descriptions for Materials Listed Above	T. Handling Codes for Wastes Listed Above

32. Special Handling Instructions and Additional Information

TRANSPORTER

33. Transporter ____ Acknowledgement of Receipt of Materials		Date
Printed/Typed Name	Signature	Month Day Year
34. Transporter ____ Acknowledgement of Receipt of Materials		Date
Printed/Typed Name	Signature	Month Day Year

FACILITY

35. Discrepancy Indication Space

EPA Form 8700-22A (Rev. 11-88) Previous editions are obsolete.

INSTRUCTIONS ON BACK SHEET

INSTRUCTIONS--CONTINUATION SHEET, U.S. EPA FORM 8700-22A

Read all instructions before completing this form. This form has been designed for use on a 12-pitch (elite) typewriter; a firm point pen may also be used--press down hard.

This form must be used as a continuation sheet to U.S. EPA Form 8700-22 if:

- More than two transporters are to be used to transport the waste;
- More space is required for the U.S. DOT description and the related information in Item 11 of U.S. EPA Form 8700-22.

Federal regulations require generators and transporters of hazardous waste and owners or operators of hazardous waste treatment, storage, or disposal facilities to use the Uniform Hazardous Waste Manifest (EPA-Form 8700-22) and, if necessary, this Continuation Sheet (EPA Form 8700-22A) for both inter- and intrastate transportation.

GENERATORS

Item 21. GENERATOR'S U.S. EPA ID NUMBER-MANIFEST DOCUMENT NUMBER

Enter the generator's U.S. EPA twelve digit identification number and the unique five digit number assigned to this Manifest (e.g. .00001) as it appears in item 1 on the first page of the Manifest.

Item 22. PAGE_____

Enter the page number of this Continuation Sheet.

Item 23. GENERATOR'S NAME

Enter the generator's name as it appears on item 3 on the first page of the Manifest.

Item 24. TRANSPORTER_____COMPANY NAME

If additional transporters are used to transport the waste described on this Manifest, enter the company name of each additional transporter in the order in which they will transport the waste. Enter after the word "Transporter" the order of the transporter. For example, Transporter 3 Company Name. Each Continuation Sheet will record the names of two additional transporters.

Item 25. U.S. EPA ID NUMBER

Enter the U.S. EPA twelve digit identification number of the transporter described in item 24.

Item 26. TRANSPORTER_____COMPANY NAME

If additional transporters are used to transport the waste described on this Manifest, enter the company name of each additional transporter in the order in which they will transport the waste. Enter after the word "Transporter" the order of the transporter. For example, Transporter 4 Company Name. Each Continuation Sheet will record the names of two additional transporters.

Item 27. U.S. EPA ID NUMBER

Enter the U.S. EPA twelve digit identification number of the transporter described in item 26.

Item 28. U.S. DOT DESCRIPTION INCLUDING PROPER SHIPPING NAME, HAZARDOUS CLASS, AND ID NUMBER (UN/NA) Refer to Item 11.

Item 29. CONTAINERS (NUMBER AND TYPE) Refer to Item 12.

Item 30. TOTAL QUANTITY Refer to Item 13.

Item 31. UNIT (WEIGHT/VOLUME) Refer to Item 14.

Item 32. SPECIAL HANDLING INSTRUCTIONS

Generators may use this space to indicate special transportation, treatment, storage, or disposal information or Bill of Lading information. States are authorized to require additional, new, or different information in this space.

* * * * * * * * * * * * * * * * *

TRANSPORTERS

Item 33. TRANSPORTER _____ ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

Enter the same number of the Transporter as identified in Item 24. Enter also the name of the person accepting the waste described on behalf of the Transporter (Company Name) identified in item 24. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

* * * * * * * * * * * * * * * * *

Item 34. TRANSPORTER _____ ACKNOWLEDGEMENT OF RECEIPT OF MATERIALS

Enter the same number as identified in item 26. Enter also the name of the person accepting the waste on behalf of the Transporter (Company Name) identified in item 26. That person must acknowledge acceptance of the waste described on the Manifest by signing and entering the date of receipt.

* * * * * * * * * * * * * * * * *

OWNERS AND OPERATORS OF TREATMENT, STORAGE, OR DISPOSAL FACILITIES.

Item 35. DISCREPANCY INDICATION SPACE Refer to Item 19.

Items L-R are not required by Federal Regulations for intra- or interstate transportation. .However, States may require generators and owners or operators of treatment, storage, or disposal facilities to complete some or all of items L-R as part of State manifest reporting requirements. Generators and owners and operators of treatment, storage or disposal facilities are advised to contact State officials for guidance on completing the shaded areas of the Manifest. The North Carolina Commission for Health Services has adopted rules requiring the completing of item O., Q., and R. Item O. and Q. are self explanatory. Item R. WASTE NUMBER: See Federal Register 40 CFR Part 261, Subpart D. For uplisted hazardous waste, enter the description which you believe best describes the waste. A waste may include more than one code number.

US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS AND ID NO.)	29. CONTAINERS NUMBER	TYPE	30. TOTAL QUANTITY	31. UNIT WEIGHT/VOLUME	R WASTE NUMBER
Waste Acetone, Flammable Liquid (UN 1090)	20	DM	9000	P	0002

FOR ADDITIONAL INFORMATION: - (919) 733-2178
CONTACT MANIFEST SYSTEMS
HAZARDOUS WASTE SECTION
WASTE MANAGEMENT DIVISION
DEPARTMENT OF ENVIRONMENT, HEALTH, AND NATURAL RESOURCES
P.O. BOX 29603, RALEIGH, N.C. 27611-27687

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. November 19, 1980;
Amended Eff. December 1, 1988;
June 1, 1988; August 1, 1987; May 1, 1987;
February 1, 1987; 1986; October 1, 1986;
January 1, July 1, 1985; October 1, 1984; October 1, 1983;
October 1, 1982; September 15, 1981.
Transferred and Recodified from 10 NCAC 10F .0030 Eff. April 4, 1990;
Amended Eff. April 1, 1993; October 1, 1990; August 30, 1990;
Recodified from 15A NCAC 13A .0007 Eff. December 20, 1996.

.0108 STANDARDS APPLICABLE TO TRANSPORTERS OF HAZARDOUS WASTE - PART 263

(a) 40 CFR 263.10 through 263.12 (Subpart A), "General", have been incorporated by reference including subsequent amendments and editions.

SUBPART A - GENERAL

263.10 Scope.

(a) These regulations establish standards which apply to persons transporting hazardous waste within the United States if the transportation requires a manifest under 40 CFR Part 262.

[Note: The regulations set forth in Parts 262 and 263 establish the responsibilities of generators and transporters of hazardous waste in the handling, transportation, and management of that waste. In these regulations, EPA has expressly adopted certain regulations of the Department of Transportation (DOT) governing the transportation of hazardous materials. These regulations concern, among other things, labeling, marking, placarding, using proper containers, and reporting discharges. EPA has expressly adopted these regulations in order to satisfy its statutory obligation to promulgate regulations which are necessary to protect human health and the environment in the transportation of hazardous waste. EPA's adoption of these DOT regulations ensures consistency with the requirements of DOT and thus avoids the establishment of duplicative or conflicting requirements with respect to those matters. These EPA regulations which apply to both interstate and intrastate transportation of hazardous waste are enforceable by EPA.

DOT has revised its hazardous materials transportation regulations in order to encompass the transportation of hazardous waste and to regulate intrastate, as well as interstate, transportation of hazardous waste. Transporters of hazardous waste are cautioned that DOT's regulations are fully applicable to their activities and enforceable by DOT. These DOT regulations are codified in Title 49, Code of Federal Regulations, Subchapter C.
EPA and DOT worked together to develop standards for transporters of hazardous waste in order to avoid conflicting requirements. Except for transporters of bulk shipments of hazardous waste by water, a transporter who meets all applicable requirements of 49 CFR Parts 171 through 179 and the requirements of 40 CFR 263.11 and 263.31 will be deemed in compliance with this part. Regardless of DOT's action, EPA retains its authority to enforce these regulations.]

(b) These regulations do not apply to on-site transportation of hazardous waste by generators or by owners or operators of permitted hazardous waste management facilities.

(c) A transporter of hazardous waste must also comply with 40 CFR Part 262, Standards Applicable to Generators of Hazardous Waste, if he:
  (1) Transports hazardous waste into the United States from abroad; or
  (2) Mixes hazardous wastes of different DOT shipping descriptions by placing them into a single container.

(d) A transporter of hazardous waste subject to the Federal manifesting requirements of 40 CFR part 262, or subject to the waste management standards of 40 CFR part 273, or subject to State requirements analogous to 40 CFR part 273, that is being imported from or exported to any of the countries listed in 40 CFR 262.58(a)(1) for purposes of recovery is subject to this Subpart and to all other relevant requirements of subpart H of 40 CFR part 262, including, but not limited to, 40 CFR 262.84 for tracking documents.

263.11 EPA identification number.

(a) A transporter must not transport hazardous wastes without having received an EPA identification number from the Administrator.

(b) A transporter who has not received an EPA identification number may obtain one by applying to the Administrator using EPA Form 8700-12. Upon receiving the request, the Administrator will assign an EPA identification number to the transporter.

263.12 Transfer facility requirements.

A transporter who stores manifested shipments of hazardous waste in containers meeting the requirements of Section 262.30 at a transfer facility for a period of ten days or less is not subject to regulation under Parts 270, 264, 265 and 268 of this chapter with respect to the storage of those wastes.

(b) 40 CFR 263.20 through 263.22 (Subpart B), "Compliance With the Manifest System and Recordkeeping", have been incorporated by reference including subsequent amendments and editions.

SUBPART B - COMPLIANCE WITH THE MANIFEST SYSTEM AND RECORDKEEPING

263.20 The manifest system.

(a) A transporter may not accept hazardous waste from a generator unless it is accompanied by a manifest signed in accordance with the provisions of 40 CFR 262.20. In the case of exports other than those subject to subpart H of 40 CFR part 262, a transporter may not accept such waste from a primary exporter or other person if he knows the shipment does not conform to the EPA Acknowledgment of Consent; and unless, in addition to a manifest signed in accordance with the provisions of 40 CFR 262.20, such waste is also accompanied by an EPA Acknowledgment of Consent which, except for shipment by rail is attached to the manifest [or shipping paper for exports by water (bulk shipment)]. For exports of hazardous waste subject to the requirements of subpart H of 40 CFR part 262, a transporter may not accept hazardous waste without a tracking document that includes all information required by 40 CFR 262.84.

(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 that the manifest accompanies the hazardous waste. In the case of exports, the transporter must ensure that a copy of the EPA Acknowledgment of Consent also accompanies the hazardous waste.

(d) A transporter who delivers a hazardous waste to another transporter or to the designated facility must:
  (1) Obtain the date of delivery and the handwritten signature of that transporter or of the owner or operator of the designated facility on the manifest; and
  (2) Retain one copy of the manifest in accordance with Section 263.22; and
  (3) Give the remaining copies of the manifest to the accepting transporter or designated facility.

(e) The requirements of paragraphs (c), (d), and (f) of this section do not apply to water (bulk shipment) transporters if:
  (1) The hazardous waste is delivered by water (bulk shipment) to the designated facility; and
  (2) A shipping paper containing all the information required on the manifest [excluding the EPA identification numbers, generator certification, and signatures] and, for exports, an EPA Acknowledgment of Consent accompanies the hazardous waste; and
  (3) The delivering transporter obtains the date of delivery and handwritten signature of the owner or operator of the designated facility on either the manifest or the shipping paper; and
  (4) The person delivering the hazardous waste to the initial water (bulk shipment) transporter obtains the date of delivery and signature of the water (bulk shipment) transporter on the manifest and forwards it to the designated facility; and
  (5) A copy of the shipping paper or manifest is retained by each water (bulk shipment) transporter in accordance with Section 263.22.

(f) For shipments involving rail transportation, the requirements of paragraphs (c), (d) and (e) do not apply and the following requirements do apply:
  (1) When accepting hazardous waste from a non-rail transporter, the initial rail transporter must:
    (i) Sign and date the manifest acknowledging acceptance of the hazardous waste;
    (ii) Return a signed 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;
    (iv) Retain one copy of the manifest and rail shipping paper in accordance with Section 263.22.
  (2) Rail transporters must ensure that a shipping paper containing all the information required on the manifest [excluding the EPA identification numbers, generator certification, and signatures) and, for exports an EPA Acknowledgment of Consent accompanies the hazardous waste at all times.

  [Note: Intermediate rail transporters are not required to sign either the manifest or shipping paper.]

(3) When delivering hazardous waste to the designated facility, a rail transporter must:
  (i) Obtain the date of delivery and handwritten signature of the owner or 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 in accordance with Section 263.22.
(4) When delivering hazardous waste to a non-rail transporter a rail transporter must:
  (i) Obtain the date of delivery and the handwritten signature of the next non-rail transporter on the manifest; and
  (ii) Retain a copy of the manifest in accordance with Section 263.22.
(5) Before accepting hazardous waste from a rail transporter, a non-rail transporter must sign and date the manifest and provide a copy to the rail transporter.

(g) Transporters who transport hazardous waste out of the United States must:
(1) Indicate on the manifest the date the hazardous waste left the United States; and
(2) Sign the manifest and retain one copy in accordance with Section 263.22(c); and
(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 at the point of departure from the United States.

(h) A transporter transporting hazardous waste from a generator who generates greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month need not comply with the requirements of this section or those of Section 263.22 provided that:
(1) The waste is being transported pursuant to a reclamation agreement as provided for in Section 262.20(e);
(2) The transporter records, on a log or shipping paper, the following information for each shipment:
  (i) The name, address, and U.S. EPA Identification Number of the generator of the waste.
  (ii) The quantity of waste accepted;
  (iii) All DOT-required shipping information;
  (iv) The date the waste is accepted; and
(3) The transporter carries this record when transporting waste to the reclamation facility; and
(4) The transporter retains these records for a period of at least three years after termination or expiration of the agreement.

263.21 Compliance with the manifest.

(a) The transporter must deliver the entire quantity of hazardous waste which he has accepted from a generator or a transporter to:
(1) The designated facility listed on the manifest; or
(2) The alternate designated facility, if the hazardous waste cannot be delivered to the designated facility because an emergency prevents delivery; or
(3) The next designated transporter; or
(4) The place outside the United States designated by the generator.

(b) If the hazardous waste cannot be delivered in accordance with paragraph (a) of this section, the transporter must contact the generator for further directions and must revise the manifest according to the generator's instructions.

263.22 Recordkeeping.

(a) A transporter of hazardous waste must keep a copy of the manifest signed by the generator, himself, and the next designated transporter or the owner or operator of the designated facility for a period of three years from the date the hazardous waste was accepted by the initial transporter.

(b) For shipments delivered to the designated facility by water (bulk shipment), each water (bulk shipment) transporter must retain a copy of a shipping paper containing all the information required in Section 263.20(e)(2) for a period of three years from the date the hazardous waste was accepted by the initial transporter.

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 the information required in Section 263.20(f)(2) for a period of three years from the date the hazardous waste was accepted by the initial transporter; and
(2) The final rail transporter must keep a copy of the signed manifest (or the shipping paper if signed by the designated facility in lieu of the manifest) for a period of three years from the date the hazardous waste was accepted by the initial transporter.

[Note: Intermediate rail transporters are not required to keep records pursuant to these regulations].

(d) A transporter who transports hazardous waste out of the United States must keep a copy of the manifest indicating that the hazardous waste left the United States for a period of three years from the date the hazardous waste was accepted by the initial transporter.

(e) The periods of retention referred to in this Section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

(c) 40 CFR 263.30 through 263.31 (Subpart C), "Hazardous Waste Discharges", have been incorporated by reference including subsequent amendments and editions.

SUBPART C - HAZARDOUS WASTE DISCHARGES

263.30 Immediate action.

(a) In the event of a discharge of hazardous waste during transportation, the transporter must take appropriate immediate action to protect human health and the environment (e.g, notify local authorities, dike the discharge area).

(b) If a discharge of hazardous waste occurs during transportation and an official (State or local government or a Federal Agency) acting within the scope of his official responsibilities determines that immediate removal of the waste is necessary to protect human health or the environment, that official may authorize the removal of the waste by transporters who do not have EPA identification numbers and without the preparation of a manifest.

(c) An air, rail, highway, or water transporter who has discharged hazardous waste must:
   (1) Give notice, if required by 49 CFR 171.15, to the National Response Center (800-424-8802 or 202-426-2675); and
   (2) Report in writing as required by 49 CFR 171.16 to the Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, Department of Transportation, Washington, D.C. 20590.

(d) A water (bulk shipment) transporter who has discharged hazardous waste must give the same notice as required by 33 CFR 153.203 for oil and hazardous substances.

263.31 Discharge clean up.

A transporter must clean up any hazardous waste discharge that occurs during transportation or take such action as may be required or approved by Federal, State, or local officials so that the hazardous waste discharge no longer presents a hazard to human health or the environment.

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. November 19, 1980;
Amended Eff. June 1, 1988; August 1, 1987; May 1, 1987;
October 1, 1986; October 1, 1983; October 1, 1982; September 15, 1981.
Transferred and Recodified from 10 NCAC 10F .0031 Eff. April 4, 1990;.
Amended Eff. April 1, 1993; October 1, 1990;
Recodified from 15A NCAC 13A .0008 Eff. December 20, 1996.

.0109 STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES - PART 264

(a) Any person who treats, stores, or disposes of hazardous waste shall comply with the requirements set forth in this Section. The treatment, storage or disposal of hazardous waste is prohibited except as provided in this Section.

(b) 40 CFR 264.1 through 264.4 (Subpart A), "(General)", are incorporated by reference including subsequent amendments and editions.

SUBPART A - GENERAL

264.1 Purpose, scope and applicability.

(a) The purpose of this part is to establish minimum national standards which define the acceptable management of hazardous waste.
(b) The standards in this part apply to owners and operators of all facilities which treat, store, or dispose of hazardous waste, except as specifically provided otherwise in this part or Part 261 of this chapter.
(c) The requirements of this part apply to a person disposing of hazardous waste by means of ocean disposal subject to a permit issued under the Marine Protection, Research, and Sanctuaries Act only to the extent they are included in an RCRA permit by rule granted to such a person under Part 270 of this chapter.

[Comment: These Part 264 regulations do apply to the treatment or storage of hazardous waste before it is loaded onto an ocean vessel for incineration or disposal at sea.]

(d) The requirements of this part apply to a person disposing of hazardous waste by means of underground injection subject to a permit issued under an Underground Injection Control (UIC) program approved or promulgated under the Safe Drinking Water Act only to the extent they are required by Section 144.14 of this chapter.

[Comment: These Part 264 regulations do apply to the above-ground treatment or storage of hazardous waste before it is injected underground.]

(e) The requirements of this part apply to the owner or operator of a POTW which treats, stores, or disposes of hazardous waste only to the extent they are included in an RCRA permit by rule granted to such a person under Part 270 of this chapter.
(f) The requirements of this part do not apply to a person who treats, stores, or disposes of hazardous waste in a State with an RCRA hazardous waste program authorized under Subpart A of Part 271 of this chapter, or in a State authorized under Subpart B of Part 271 of this chapter for the component or components of Phase II interim authorization which correspond to the person's treatment, storage or disposal processes; except that this part will apply:

    (1) As stated in paragraph (d) of this section, if the authorized State RCRA program does not cover disposal of hazardous waste by means of underground injection; and
    (2) To a person who treats, stores or disposes of hazardous waste in a State authorized under Subpart A, Part 271 of this chapter, at a facility which was not covered by standards under this part when the State obtained authorization, and for which EPA promulgates standards under this part after the State is authorized. This paragraph will only apply until the State is authorized to permit such facilities under Subpart A of Part 271 of this chapter.
    (3) To a person who treats, stores, or disposes of hazardous waste in a State which is authorized under Subpart A or B of Part 271 of this chapter if the State has not been authorized to carry out the requirements and prohibitions applicable to the treatment, storage, or disposal of hazardous waste at his facility which are imposed pursuant to the Hazardous and Solid Waste Amendments of 1984. The requirements and prohibitions that are applicable until a State receives authorization to carry them out include all Federal program requirements identified in section 271.1(j).

(g) The requirements of this part do not apply to:

    (1) The owner or operator of a facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the only hazardous waste the facility treats, stores, or disposes of is excluded from regulation under this part by Section 261.5 of this chapter;
    (2) The owner or operator of a facility managing recyclable materials described in Section 261.6(a)(2),(3) and (4) of this chapter (except to the extent they are referred to in part 279 or subparts C,D,F, or G of part 266 of this chapter).
    (3) A generator accumulating waste on-site in compliance with Section 262.34 of this chapter;

(4) A farmer disposing of waste pesticides from his own use in compliance with Section 262.70 of this chapter; or

(5) The owner or operator of a totally enclosed treatment facility, as defined in Section 260.10.

(6) The owner or operator of an elementary neutralization unit or a wastewater treatment unit as defined in Section 260.10 of this chapter, provided that if the owner or operator is diluting hazardous ignitable (D001) wastes (other than the D001 High TOC Subcategory defined in Section 268.40, of this chapter, Table Treatment Standards for Hazardous Wastes), or reactive (D003) waste, to remove the characteristic before land disposal, the owner/operator must comply with the requirements set out in Section 264.17(b).

(7) [Reserved]

(8) (i) Except as provided in paragraph (g)(8)(ii) of this section, a person engaged in treatment or containment activities during immediate response to any of the following situations:

(A) A discharge of a hazardous waste;

(B) An imminent and substantial threat of a discharge of hazardous waste;

(C) A discharge of a material which, when discharged, becomes a hazardous waste.

(D) An immediate threat to human health, public safety, property, or the environment, from the known or suspected presence of military munitions, other explosive material, or an explosive device, as determined by an explosive or munitions emergency response specialist as defined in 40 CFR 260.10.

(ii) An owner or operator of a facility otherwise regulated by this part must comply with all applicable requirements of Subparts C and D.

(iii) Any person who is covered by paragraph (g)(8)(i) of this section and who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of this part and Parts 122 through 124 of this chapter for those activities.

(iv) In the case of an explosives or munitions emergency response, if a Federal, State, Tribal or local official acting within the scope of his or her official responsibilities, or an explosives or munitions emergency response specialist, determines that immediate removal of the material or waste is necessary to protect human health or the environment, that official or specialist may authorize the removal of the material or waste by transporters who do not have EPA identification numbers and without the preparation of a manifest. In the case of emergencies involving military munitions, the responding military emergency response specialist's organizational unit must retain records for three years identifying the dates of the response, the responsible persons responding, the type and description of material addressed, and its disposition.

(9) A transporter storing manifested shipments of hazardous waste in containers meeting the requirements of 40 CFR Section 262.30 at a transfer facility for a period of ten days or less.

(10) The addition of absorbent material to waste in a container (as defined in Section 260.10 of this chapter) or the addition of waste to absorbent material in a container, provided that these actions occur at the time waste is first placed in the container; and Sections 264.17(b), 264.171, and 264.172 are complied with.

(11) Universal waste handlers and universal waste transporters (as defined in 40 CFR 260.10) handling the wastes listed below. These handlers are subject to regulation under 40 CFR part 273, when handling the below listed universal wastes.

(i) Batteries as described in 40 CFR 273.2;

(ii) Pesticides as described in 40 CFR 273.3; and

(iii) Thermostats as described in 40 CFR 273.4.

(h) The requirements of this part apply to owners or operators of all facilities which treat, store, or dispose of hazardous wastes referred to in Part 268.

(i) Section 266.205 of this chapter identifies when the requirements of this part apply to the storage of military munitions classified as solid waste under §266.202 of this chapter. The treatment and disposal of hazardous waste military munitions are subject to the applicable permitting, procedural, and technical standards in 40 CFR parts 260 through 270,

264.2 [Reserved]

264.3 Relationship to interim status standards.

A facility owner or operator who has fully complied with the requirements for interim status as defined in Section 3005(e) of RCRA and regulations under Section 270.70 of this chapter must comply with the regulations specified in Part 265 of this Chapter in lieu of the regulations in this part, until final administrative disposition of his permit application is made, except as provided under 40 CFR part 264 subpart S.

[Comment: As stated in Section 3005(a) of RCRA, after the effective date of regulations under that section, i.e., Parts 270 and 124 of this chapter, the treatment, storage, or disposal of hazardous waste is prohibited except in accordance with a permit. Section 3005(e) of RCRA provides for the continued operation of an existing facility which meets certain conditions until final administrative disposition of the owner's or operator's permit application is made.]

264.4 Imminent hazard action.

Notwithstanding any other provisions of these regulations, enforcement actions may be brought pursuant to Section 7003 of RCRA.

(c) 40 CFR 264.10 through 264.19 (Subpart B), "General Facility Standards", are incorporated by reference including subsequent amendments and editions.

SUBPART B - GENERAL FACILITY STANDARDS

264.10 Applicability.

(a) The regulations in this Subpart apply to owners and operators of all hazardous waste facilities, except as provided in Section 264.1 and in paragraph (b) of this Section.
(b) Section 264.18(b) applies only to facilities subject to regulation under Subparts I through 0 and Subpart X of this part.

264.11 Identification number.

Every facility owner or operator must apply to EPA for an EPA identification number in accordance with the EPA notification procedures (45 FR 12746).

264.12 Required notices.

(a) (1) The owner or 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 the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required.

(a) (2) The owner or operator of a recovery facility that has arranged to receive hazardous waste subject to 40 CFR part 262, subpart H must provide a copy of the tracking document bearing all required signatures to the notifier, to the Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting and Data Division (2222A), Environmental Protection Agency, 401 M St., SW., Washington, DC 20460; and to the competent authorities of all other concerned countries within three working days of receipt of the shipment. The original of the signed tracking document must be maintained at the facility for at least three years.

(b) The owner or operator of a facility that receives hazardous waste from an off-site source (except where the owner or operator is also the generator) must inform the generator in writing that he has the appropriate permit(s) for, and will accept, the waste the generator is shipping. The owner or operator must keep a copy of this written notice as part of the operating record.

(c) Before transferring ownership or operation of a facility during its operating life, or of a disposal facility during the post-closure care period, the owner or operator must notify the new owner or operator in writing of the requirements of this part and Part 270 of this chapter.

[Comment: An owner's or operator's failure to notify the new owner or operator of the requirements of this part in no way relieves the new owner or operator of his obligation to comply with all applicable requirements.]

264.13 General waste analysis.

(a) (1) Before an owner or operator treats, stores, or disposes of any hazardous wastes, or non-hazardous wastes if applicable under Section 264.113(d), he must obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, the analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with this part and part 268 of this chapter.

(2) The analysis may include data developed under Part 261 of this chapter, and existing published or documented data on the hazardous waste or on hazardous waste generated from similar processes.

[Comment: For example, the facility's records of analyses performed on the waste before the effective date of these regulations, or studies conducted on hazardous waste generated from processes similar to that which generated the waste to be managed at the facility, may be included in the data base required to comply with paragraph (a)(1) of this section. The owner or operator of an off-site facility may arrange for the generator of the hazardous waste to supply part of the information required by paragraph (a)(1) of this section, except as otherwise specified in 40 CFR 268.7(b)

and (c). If the generator does not supply the information, and the owner or operator chooses to accept a hazardous waste, the owner or operator is responsible for obtaining the information required to comply with this section.]

(3) The analysis must be repeated as necessary to ensure that it is accurate and up to date. At a minimum, the analysis must be repeated:
  (i) When the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous wastes, or non-hazardous wastes if applicable under Section 264.113(d), has changed; and
  (ii) For off-site facilities, when the results of the inspection required in paragraph (a) (4) of this section indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

(4) The owner or operator of an off-site facility must inspect and, if necessary, analyze each hazardous waste movement received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.

(b) The owner or operator must develop and follow a written waste analysis plan which describes the procedures which he will carry out to comply with paragraph (a) of this section. He must keep this plan at the facility. At a minimum, the plan must specify:
(1) The parameters for which each hazardous waste, or non-hazardous waste if applicable under Section 264.113(d), will be analyzed and the rationale for the selection of these parameters (i.e., how analysis for these parameters will provide sufficient information on the waste's properties to comply with paragraph (a) of this section);
(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. A representative sample may be obtained using either:
  (i) One of the sampling methods described in Appendix I of Part 261 of this chapter, or
(ii) An equivalent sampling method.

[Comment: See Section 260.21 of this chapter for related discussion.]

(4) The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date; and
(5) For off-site facilities, the waste analyses that hazardous waste generators have agreed to supply.
(6) Where applicable, the methods that will be used to meet the additional waste analysis requirements for specific waste management methods as specified in Sections 264.17, 264.314, 264.341, 264.1034(d), 264.1063(d), 264.1083, and 268.7 of this chapter.
(7) For surface impoundments exempted from land disposal restrictions under Section 268.4(a), the procedures and schedules for:
  (i) The sampling of impoundment contents;
  (ii) The analysis of test data; and,
  (iii) The annual removal of residues which are not delisted under Section 260.22 of this chapter or which exhibit a characteristic of hazardous waste and either:
    (A) Do not meet applicable treatment standards of Part 268, Subpart D; or
    (B) Where no treatment standards have been established;
      (1) Such residues are prohibited from land disposal under Section 268.32 or RCRA section 3004(d); or
      (2) Such residues are prohibited from land disposal under Section 268.33(f).
(8) For owners and operators seeking an exemption to the air emission standards of subpart CC in accordance with Section 264.1082.
  (i) If direct measurement is used for the waste determination, the procedures and schedules for waste sampling and analysis, and the results of the analysis of test data to verify the exemption.
  (ii) If knowledge of the waste is used for the waste determination, any information prepared by the facility owner or operator or by the generator of the hazardous waste, if the waste is received from off-site, that is used as the basis for knowledge of the waste.

(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, if necessary, analyze each movement of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan must describe:
(1) The procedures which will be used to determine the identity of each movement of waste managed at the facility; and
(2) The sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling.

(3) The procedures that the owner or operator of an off-site landfill receiving containerized hazardous waste will use to determine whether a hazardous waste generator or treater has added a biodegradable sorbent to the waste in the container.

[Comment: Part 270 of this chapter requires that the waste analysis plan be submitted with Part B of the permit application.]

264.14 Security.

(a) The owner or operator must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of his facility, unless he can demonstrate to the Regional Administrator that:
   (1) Physical contact with the waste, structures, or equipment within the active portion of the facility will not injure unknowing or unauthorized persons or livestock which may enter the active portion of a facility; and
   (2) Disturbance of the waste or equipment, by the knowing or unauthorized entry of persons or livestock onto the active portion of a facility, will not cause a violation of the requirements of this Part.

[Comment: Part 270 of this chapter requires that an owner or operator who wishes to make the demonstration referred to above must do so with Part B of the permit application.]

(b) Unless the owner or operator has made a successful demonstration under paragraphs (a) (1) and (2) of this section, a facility must have:
   (1) A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) which continuously monitors and controls entry onto the active portion of the facility; or
   (2) (i) An artificial or natural barrier (e.g., a fence in good repair or a fence combined with a cliff), which completely surrounds the active portion of the facility; and
   (ii) A means to control entry, at all times, through the gates or other entrances to the active portion of the facility (e.g., an attendant, television monitors, locked entrance, or controlled roadway access to the facility).

[Comment: The requirements of paragraph (b) of this section are satisfied if the facility or plant within which the active portion is located itself has a surveillance system, or a barrier and a means to control entry, which complies with the requirements of paragraph (b)(1) or (2) of this section.]

(c) Unless the owner or operator has made a successful demonstration under paragraphs (a)(1) and (2) of this section, 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 this active portion. The legend must be written in English and in any other language predominant in the area surrounding the facility (e.g., facilities in counties bordering the Canadian province of Quebec must post signs in French; facilities in counties bordering Mexico must post signs in Spanish), and must be legible from a distance of at least 25 feet. Existing signs with a legend other than "Danger--Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous.

[Comment: See Section 264.117(b) for discussion of security requirements at disposal facilities during the post-closure care period.]

264.15 General inspection requirements.

(a) The owner or operator must inspect his facility for malfunctions and deterioration, operator errors, and discharges which may be causing--or may lead to--(1) release of hazardous waste constituents to the environment or (2) a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

(b) (1) The owner or operator must develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.
   (2) He must keep this schedule at the facility.

(3) The schedule must identify the types of problems (e.g., malfunctions or deterioration) which are to be looked for during the inspection (e.g., inoperative sump pump, leaking fitting, eroding dike, etc.).

(4) The frequency of inspection may vary for the items on the schedule. However, it should be based on the rate of deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use. At a minimum, the inspection schedule must include the items and frequencies called for in Sections 264.174, 264.193, 264.195, 264.226, 264.254, 264.278, 264.303, 264.347, 264.602, 264.1033, 264.1052, 264.1053, 264.1058, 264.1088, and 264.1091(b), where applicable.

[Comment: Part 170 of this chapter requires the inspection schedule to be submitted with Part B of the permit application. EPA will evaluate the schedule along with the rest of the application to ensure that it adequately protects human health and the environment. As part of this review, EPA may modify or amend the schedule as may be necessary.]

(c) The owner or operator must remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

(d) The owner or operator must record inspections in an inspection log or summary. He must keep these records for at least three years from the date of inspection. At a minimum, 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 or other remedial actions.

264.16 Personnel training.

(a) (1) Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of this part. The owner or operator must ensure that this program includes all the elements described in the document required under paragraph (d)(3) of this section.

[Comment: Part 270 of this chapter requires that owners and operators submit with Part B of the RCRA permit application, an outline of the training program used (or to be used) at the facility and a brief description of how the training program is designed to meet actual job tasks.]

(2) This program must be directed by a person trained in hazardous waste management procedures, and must include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed.

(3) At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including, where applicable:

(i) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;

(ii) Key parameters for automatic waste feed cut-off systems;

(iii) Communications or alarm systems;

(iv) Response to fires or explosions;

(v) Response to ground-water contamination incidents; and

(vi) Shutdown of operations.

(b) Facility personnel must successfully complete the program required in paragraph (a) of this Section within six months after the effective date of these regulations or six months after the date of their employment or assignment to a facility, or to a new position at a facility, whichever is later. Employees hired after the effective date of these regulations must not work in unsupervised positions until they have completed the training requirements of paragraph (a) of this section.

(c) Facility personnel must take part in an annual review of the initial training required in paragraph (a) of this section.

(d) The owner or operator must maintain the following documents and records at the facility:

(1) The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job;

(2) A written job description for each position listed under paragraph (d)(1) of this section. This description may be consistent in its degree of specificity with descriptions for other similar positions in the same

company location or bargaining unit, but must include the requisite skill, education, or other qualifications, and duties of employees assigned to each position;

(3) A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under paragraph (d)(1) of this section;

(4) Records that document that the training or job experience required under paragraphs (a), (b), and (c) of this Section has been given to, and completed by, facility personnel.

(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. Personnel training records may accompany personnel transferred within the same company.

264.17 General requirements for ignitable, reactive, or incompatible wastes.

(a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste 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 (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or 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 waste.

(b) Where specifically required by other sections of this part, the owner or operator of a facility that treats, stores or disposes ignitable or reactive waste, or mixes incompatible waste or incompatible wastes and other materials, must take precautions to prevent reactions which:

(1) Generate extreme heat or pressure, fire or explosions, or violent reactions;

(2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;

(3) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;

(4) Damage the structural integrity of the device or facility;

(5) Through other like means threaten human health or the environment.

(c) When required to comply with paragraphs (a) or (b) of this Section, the owner or operator must document that compliance. This documentation may be based on references to published scientific or engineering literature, data from trial tests (e.g., bench scale or pilot scale tests), waste analyses (as specified in Section 264.13), or the results of the treatment of similar wastes by similar treatment processes and under similar operating conditions.

264.18 Location standards. **(See 15A NCAC 13A .0109 (r) which follows, for additional location standards.)**

(a) Seismic considerations.

(1) Portions of new facilities where treatment, storage, or disposal of hazardous waste will be conducted must not be located within 61 meters (200 feet) of a fault which has had displacement in Holocene time.

(2) As used in paragraph (a)(1) of this section:

(i) "Fault" means a fracture along which rocks on one side have been displaced with respect to those on the other side;

(ii) "Displacement" means the relative movement of any two sides of a fault measured in any direction;

(iii) "Holocene" means the most recent epoch of the Quarternary Period, extending from the end of the Pleistocene to the present.

[Comment: Procedures for demonstrating compliance with this standard in Part B of the permit application are specified in Section 270.14(b)(11). Facilities which are located in political jurisdictions other than those listed in Appendix VI of this part are assumed to be in compliance with this requirement.]

(b) Floodplains

(1) A facility located in a 100-year floodplain must be designed, constructed, operated, and maintained to prevent washout of any hazardous waste by a 100-year flood unless the owner or operator can demonstrate to the Regional Administrator's satisfaction that:

(i) Procedures are in effect which will cause the waste to be removed safely, before flood waters can reach the facility, to a location where the wastes will not be vulnerable to flood waters; or

(ii) For existing surface impoundments, waste piles, land treatment units, landfills, and miscellaneous units, no adverse effects on human health or the environment will result if washout occurs, considering:

(A) The volume and physical and chemical characteristics of the waste in the facility;

(B) The concentration of hazardous constituents that would potentially affect surface waters as a result of washout;

(C) The impact of such concentrations on the current or potential uses of and water quality standards established for the affected surface waters; and

(D) The impact of hazardous constituents on the sediments of affected surface waters on the soils of the 100-year flood plain that could result from washout.

[Comment: The location where wastes are moved must be a facility which is either permitted by EPA under Part 270 of this Chapter, authorized to manage hazardous waste by a State with a hazardous waste management program authorized under Part 271 of this Chapter, or in interim status under Parts 270 and 265 of this chapter.]

(2) As used in paragraph (b)(1) of this section:

(i) "100-year floodplain" means any land area which is subject to a one percent or greater chance of flooding in any given year from any source;

(ii) "Washout" means the movement of hazardous waste from the active portion of the facility as a result of flooding;

(iii) "100-year flood" means a flood that has a one percent chance of being equalled or exceeded in any given year.

[Comment: (1) Requirements pertaining to other Federal laws which affect the location and permitting of facilities are found in Section 270.3 of this chapter. For details relative to these laws, see EPA's manual for SEA (special environmental area) requirements for hazardous waste facility permits. Though EPA is responsible for complying with these requirements, applicants are advised to consider them in planning the location of a facility to help prevent subsequent project delays.]

(c) Salt dome formations, salt bed formations, underground mines and caves.

The placement of any noncontainerized or bulk liquid hazardous waste in any salt dome formation, salt bed formation, underground mine or cave is prohibited, except for the Department of Energy Waste Isolation Pilot Project in New Mexico.

264.19 Construction quality assurance program.

(a) CQA program.

(1) A construction quality assurance (CQA) program is required for all surface impoundment, waste pile, and landfill units that are required to comply with Sections 264.221(c) and (d), 264.251(c) and (d), and 264.301(c) and (d). The program must ensure that the constructed unit meets or exceeds all design criteria and specifications in the permit. The program must be developed and implemented under the direction of a CQA officer who is a registered professional engineer.

(2) The CQA program must address the following physical components, where applicable:

(i) Foundations;

(ii) Dikes;

(iii) Low-permeability soil liners;

(iv) Geomembranes (flexible membrane liners);

(v) Leachate collection and removal systems and leak detection systems; and

(vi) Final cover systems.

(b) Written CQA plan. The owner or operator of units subject to the CQA program under paragraph (a) of this section must develop and implement a written CQA plan. The plan must identify steps that will be used to monitor and document the quality of materials and the condition and manner of their installation. The CQA plan must include:

(1) Identification of applicable units, and a description of how they will be constructed.

(2) Identification of key personnel in the development and implementation of the CQA plan, and CQA officer qualifications.

(3) A decription of inspection and sampling activities for all unit components identified in paragraph (a)(2) of this section, including observations and tests that will be used before, during, and after construction to

ensure that the construction materials and the installed unit components meet the design specifications. The description must cover: Sampling size and locations; frequency of testing; data evaluation procedures; acceptance and rejection criteria for construction materials; plans for implementing corrective measures; and data or other information to be recorded and retained in the operating record under Section 264.73.

(c) Contents of program.

(1) The CQA program must include observations, inspections, tests, and measurements sufficient to ensure:

(i) Structural stability and integrity of all components of the unit identified in paragraph (a)(2) of this section;

(ii) Proper construction of all components of the liners, leachate collection and removal system, leak detection system, and final cover system, according to permit specifications and good engineering practices, and proper installation of all components (e.g., pipes) according to design specifications;

(iii) Conformity of all materials used with design and other material specifications under Sections 264.221, 264.251, and 264.301.

(2) The CQA program shall include test fills for compacted soil liners, using the same compaction methods as in the full-scale unit, to ensure that the liners are constructed to meet the hydraulic conductivity requirements of Sections 264.221(c)(1)(i)(B), 264.251(c)(1)(i)(B), and 264.301(c)(1)(i)(B) in the field. Compliance with the hydraulic conductivity requirements must be verified by using in-situ testing on the constructed test fill. The Regional Administrator may accept an alternative demonstration, in lieu of a test fill, where data are sufficient to show that a constructed soil liner will meet the hydraulic conductivity requirements of Sections 264.221(c)(1)(i)(B), 264.251(c)(1)(i)(B), and 264.301(c)(1)(i)(B) in the field.

(d) Certification. Waste shall not be received in a unit subject to Section 264.19 until the owner or operator has submitted to the Regional Administrator by certified mail or hand delivery a certification signed by the CQA officer that the approved CQA plan has been successfully carried out and that the unit meets the requirements of Sections 264.221(c) or (d), 264.231(c) or (d), or 264.301(c) or (d); and the procedure in Section 270.30(1)(2)(ii) of this chapter has been completed. Documentation supporting the CQA officer's certification must be furnished to the Regional Administrator upon request.

(d) 40 CFR 264.30 through 264.37 (Subpart C), "Preparedness and Prevention", are incorporated by reference including subsequent amendments and editions.

SUBPART C - PREPAREDNESS AND PREVENTION

264.30 Applicability.

The regulations in this Subpart apply to owners and operators of all hazardous waste facilities, except as Section 264.1 provides otherwise.

264.31 Design and operation of facility.

Facilities must be designed, constructed, maintained, and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

264.32 Required equipment.

All facilities must be equipped with the following, unless it can be demonstrated to the Regional Administrator that 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 capable of providing immediate emergency instruction (voice or signal) to facility personnel;
(b) A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams;
(c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and
(d) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

[Comment: Part 270 of this chapter requires that an owner or operator who wishes to make the demonstration referred to above must do so with Part B of the permit application.]

264.33 Testing and maintenance of equipment.

All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.

264.34 Access to communications or alarm system.

(a) Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless the Regional Administrator has ruled that such a device is not required under Section 264.32.
(b) If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, unless the Regional Administrator has ruled that such a device is not required under Section 264.32.

264.35 Required aisle space.

The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the Regional Administrator that aisle space is not needed for any of these purposes.

[Comment: Part 270 of this chapter requires that an owner or operator who wishes to make the demonstration referred to above must do so with Part B of the permit application.]

264.37 Arrangement with local authorities.

(a) The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations:
    (1) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes;
    (2) Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;
    (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 the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.
(b) Where State or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.

(e) 40 CFR 264.50 through 264.56 (Subpart D), "Contingency Plan and Emergency Procedures", are incorporated by reference including subsequent amendments and editions.

SUBPART D - CONTINGENCY PLAN AND EMERGENCY PROCEDURES

264.50 Applicability.

The regulations in this Subpart apply to owners and operators of all hazardous waste facilities, except as Section 264.1 provides otherwise.

264.51 Purpose and implementation of contingency plan.

(a) Each owner or operator must have a contingency plan for his facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.
(b) The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents which could threaten human health or the environment.

264.52 Content of contingency plan.

(a) The contingency plan must describe the actions facility personnel must take to comply with Sections 264.51 and 264.56 in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.
(b) If the owner or operator has already prepared a Spill Prevention Control, and Countermeasures (SPCC) Plan in accordance with Part 112 of this chapter, or Part 1510 of Chapter V, or some other emergency or contingency plan, he need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this part.
(c) The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services, pursuant to Section 264.37.
(d) The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see Section 264.55), and this list must be kept up-to-date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates. For new facilities, this information must be supplied to the Regional Administrator at the time of certification, rather than at the time of permit application.
(e) The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up-to-date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.
(f) The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires).

264.53 Copies of contingency plan.

A copy of the contingency plan and all revisions to the plan must be:

(a) Maintained at the facility; and
(b) Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.

[Comment: The contingency plan must be submitted to the Regional Administrator with Part B of the permit application under Part 270 of this chapter and, after modification or approval, will become a condition of any permit issued.]

264.54 Amendment of contingency plan.

The contingency plan must be reviewed and immediately amended, if necessary, whenever:

(a) The facility permit is revised;
(b) The plan fails in an emergency;
(c) The facility changes – in its design, construction, operation, maintenance, or other circumstances – in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
(d) The list of emergency coordinators changes; or
(e) The list of emergency equipment changes.

264.55 Emergency coordinator.

At all times, there must be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

[Comment: The emergency coordinator's responsibilities are more fully spelled out in Section 264.56. Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of waste(s) handled by the facility, and type and complexity of the facility.]

264.56 Emergency procedures.

(a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately:
    (1) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and
    (2) Notify appropriate State or local agencies with designated response roles if their help is needed.
(b) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials. He may do this by observation or review of facility records or manifests and, if necessary, by chemical analysis.
(c) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-off from water or chemical agents used to control fire and heat-induced explosions).
(d) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health or the environment outside the facility, he must report his findings as follows:
    (1) If his assessment indicates that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated; and
    (2) He must immediately notify either the government official designated as the on-scene coordinator for that geographical area, (in the applicable regional contingency plan under Part 1510 of this Title) or the National Response Center (using their 24-hour toll free number 800/424-8802). The report must include:
        (i) Name and telephone number of reporter;
        (ii) Name and address of facility;
        (iii) Time and type of incident (e.g., release, fire);
        (iv) Name and quantity of material(s) involved, to the extent known;
        (v) The extent of injuries, if any; and
        (vi) The possible hazards to human health, or the environment, outside the facility.
(e) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing release waste, and removing or isolating containers.

(f) If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

(g) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

[Comment: Unless the owner or operator can demonstrate, in accordance with Section 261.3(c) or (d) of this Chapter, that the recovered material is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of Parts 262, 263 and 264 of this chapter.]

(h) The emergency coordinator must ensure that, in the affected area(s) of the facility:
  (1) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
  (2) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

(i) The owner or operator must notify the Regional Administrator, and appropriate State and local authorities, that the facility is in compliance with paragraph (h) of this section before operations are resumed in the affected area(s) of the facility.

(j) The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he must submit a written report on the incident to the Regional Administrator. The report must include:
  (1) Name, address, and telephone number of the owner or operator;
  (2) Name, address, and telephone number of the facility;
  (3) Date, time, and type of incident (e.g., fire, explosion);
  (4) Name and quantity of material(s) involved;
  (5) The extent of injuries, if any;
  (6) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
  (7) Estimated quantity and disposition of recovered material that resulted from the incident.

(f) 40 CFR 264.70 through 264.77 (Subpart E), "Manifest System, Recordkeeping, and Reporting", are incorporated by reference including subsequent amendments and editions.

SUBPART E - MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING

264.70 Applicability.

The regulations in this subpart apply to owners and operators of both on-site and off-site facilities, except as section 264.1 provides otherwise. Section 264.71, 264.72, and 264.76 do not apply to owners and operators of on-site facilities that do not receive any hazardous waste from off-site sources, and to owners and operators of off-site facilities with respect to waste military munitions exempted from manifest requirements under 40 CFR 266.203(a). Section 264.73(b) only applies to permittees who treat, store, or dispose of hazardous wastes on-site where such wastes were generated.

264.71 Use of manifest system.

(a) If a facility receives hazardous waste accompanied by a manifest, the owner or operator, or his agent, must:

(1) Sign and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received;
(2) Note any significant discrepancies in the manifest [as defined in Section 264.72(a)] on each copy of the manifest;

[Comment: The Agency does not intend that the owner or operator of a facility whose procedures under Section 264.13(c) include waste analysis must perform that analysis before signing the manifest and giving it to the transporter. Section 264.72(b), however, requires reporting an unreconciled discrepancy discovered during later analysis.]

(3) Immediately give the transporter at least one copy of the signed manifest;
(4) Within 30 days after the delivery, send a copy of the manifest to the generator; and
(5) Retain at the facility a copy of each manifest for at least three years from the date of delivery.

(b) If a facility receives, from a rail or water (bulk shipment) transporter, hazardous waste which is accompanied by a shipping paper containing all the information required on the manifest (excluding the EPA identification numbers, generator's certification, and signatures), the owner or operator, or his agent must:

(1) Sign and date each copy of the manifest or shipping paper (if the manifest has not been received) to certify that the hazardous waste covered by the manifest or shipping paper was received;
(2) Note any significant discrepancies [as defined in Section 264.72(a)] in the manifest or shipping paper (if the manifest has not been received) on each copy of the manifest or shipping paper.

[Comment: The Agency does not intend that the owner or operator of a facility whose procedures under Section 264.13(c) include waste analysis must perform that analysis before signing the shipping paper and giving it to the transporter. Section 264.72(b), however, requires reporting an unreconciled discrepancy discovered during later analysis.]

(3) Immediately give the rail or water (bulk shipment) transporter at least one copy of the manifest or shipping paper (if the manifest has not been received;
(4) Within 30 days after the delivery, send a copy of the signed and dated manifest to the generator; however, if the manifest has not been received within 30 days after delivery, the owner or operator, or his agent, must send a copy of the shipping paper signed and dated to the generator; and

[Comment: Section 262.23(c) of this chapter requires the generator to send three copies of the manifest to the facility when hazardous waste is sent by rail or water (bulk shipment).]

(5) Retain at the facility a copy of the manifest and shipping paper (if signed in lieu of the manifest at the time of delivery) for at least three years from the date of delivery.

(c) Whenever a shipment of hazardous waste is initiated from a facility, the owner or operator of that facility must comply with the requirements of Part 262 of this chapter.

[Comment: The provisions of Section 262.34 are applicable to the on-site accumulation of hazardous wastes by generators. Therefore, the provisions of Section 262.34 only apply to owners or operators who are shipping hazardous waste which they generated at that facility.]

(d) Within three working days of the receipt of a shipment subject to 40 CFR part 262, subpart H, the owner or operator of the facility must provide a copy of the tracking document bearing all required signatures to the notifier, to the Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting and Data Division (2222A). Environmental Protection Agency, 401 M St., SW., Washington, DC 204609, and to competent authorities of all other concerned countries. The original copy of the tracking document must be maintained at the facility for at least three years from the date of signature.

264.72 Manifest discrepancies.

(a) Manifest discrepancies are differences between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity or type of hazardous waste a facility actually receives. Significant discrepancies in quantity are:
  (1) For bulk waste, variations greater than 10 percent in weight; and
  (2) For batch waste, any variation in piece count, such as a discrepancy of one drum in a truckload. Significant discrepancies in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper.

(b) Upon discovering a significant discrepancy, the owner or operator must attempt to reconcile the discrepancy with the waste generator or transporter (e.g., with telephone conversations). If the discrepancy is not resolved within 15 days after receiving the waste, the owner or operator must immediately submit to the Regional Administrator a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

264.73 Operating record.

(a) The owner or operator must keep a written operating record at his 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 the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage, or disposal at the facility as required by Appendix I;
  (2) The location of each hazardous waste within the facility and the quantity at each location. For disposal facilities, the location and quantity of each hazardous waste must be recorded on a map or diagram of each cell or disposal area. For all facilities, this information must include cross-references to specific manifest document numbers, if the waste was accompanied by a manifest;

[Comment: See Section 264.119 for related requirements.]

  (3) Records and results of waste analyses and waste determinatins performed as specified in Sections 264.13, 264.17, 264.314, 264.341, 264.1034, 264.1063, 264.1083, 268.4(a), and 268.7 of this chapter.
  (4) Summary reports and details of all incidents that require implementing the contingency plan as specified in Section 264.56(j);
  (5) Records and results of inspections as required by Section 264.15(d) (except these data need be kept only three years);
  (6) Monitoring, testing, or analytical data, and corrective action where required by Subpart F of this part and Sections 264.19, 264.191, 264.193, 264.195, 264.222, 264.223, 264.226, 264.252 through 264.254, 264.276, 264.278, 264.280, 264.302 through 264.304, 264.309, 264.347, 264.602, 264.1034(c) through 264.304(f), 264.1035, 264.1063(d) through 264.1063(i), 264.1064, 264.1088, 264.1089, and 264.1091.
  (7) For off-site facilities, notices to generators as specified in Section 264.12(b); and
  (8) All closure cost estimates under Section 264.142, and, for disposal facilities, all post-closure cost estimates under Section 264.144.
  (9) A certification by the permittee no less often than annually, that the permittee has a program in place to reduce the volume and toxicity of hazardous waste that he generates to the degree determined by the permittee to be economically practicable; and the proposed method of treatment, storage or disposal is that practicable method currently available to the permittee which minimizes the present and future threat to human health and the environment.

(10) Records of the quantities (and date of placement) for each shipment of hazardous waste placed in land disposal units under an extension to the effective date of any land disposal restriction granted pursuant to Section 268.5 a petition pursuant to Section 268.6, or a certification under Section 268.8, and the applicable notice required by a generator under Section 268.7(a);
(11) For an off-site treatment facility, a copy of the notice, and the certification and demonstration, if applicable, required by the generator or the owner or operator under Section 268.7 or Section 268.8;
(12) For an on-site treatment facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator under Section 268.7 or Section 268.8;
(13) For an off-site land disposal facility, a copy of the notice, and the certification and demonstration if applicable, required by the generator or the owner or operator of a treatment facility under Section 268.7 and Section 268.8, whichever is applicable; and
(14) For an on-site land disposal facility, the information contained in the notice required by the generator or owner or operator of a treatment facility under Section 268.7, except for the manifest number, and the certification and demonstration if applicable, required under Section 268.8, whichever is applicable.
(15) For an off-site storage facility, a copy of the notice, and the certification and demonstration if applicable, required by the generator or the owner or operator under Section 268.7 or Section 268.8; and
(16) For an on-site storage facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator under Section 268.7 or Section 268.8.

264.74 Availability, retention, and disposition of records.

(a) All records, including plans, required under this Part must be furnished upon request, and made available at all reasonable times for inspection, by any officer, employee, or representative of EPA who is duly designated by the Administrator.
(b) The retention period for all records required under this part is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the Administrator.
(c) A copy of records of waste disposal locations and quantities under Section 264.73(b)(2) must be submitted to the Regional Administrator and local land authority upon closure of the facility.

264.75 Biennial report. **(See Also 15A NCAC 13A .0101(b)(3) Which Requires An Annual Report)**

The owner or operator must prepare and submit a single copy of a biennial report to the Regional Administrator by March 1 of each even numbered year. The biennial report must be submitted on EPA form 8700-13B. The report must cover facility activities during the previous calendar year and must include:

(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 from which the facility received a hazardous waste during the year; for imported shipments, the report must give the name and address of the foreign generator;
(d) A description and the quantity of each hazardous waste the facility received during the year. For off-site facilities, this information must be listed by EPA identification number of each generator.
(e) The method of treatment, storage, or disposal for each hazardous waste;
(f) [Reserved]
(g) The most recent closure cost estimate under Section 264.142, and, for disposal facilities, the most recent post-closure cost estimate under Section 264.144; and
(h) For generators who treat, store, or dispose of hazardous waste on-site, a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated.
(i) For generators who treat, store, or dispose of hazardous waste on-site, a description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for the years prior to 1984.
(j) The certification signed by the owner or operator of the facility or his authorized representative.

264.76 Unmanifested waste report.

If a facility accepts for treatment, storage, or disposal any hazardous waste from an off-site source without an accompanying manifest, or without an accompanying shipping paper as described in Section 263.20(e)(2) of this Chapter, and if the waste is not excluded from the manifest requirement by Section 261.5 of this Chapter, then the owner or operator must prepare and submit a single copy of a report to the Regional Administrator within fifteen days after receiving the waste. The unmanifested waste report must be submitted on EPA form 8700-13B. Such report must be designated 'Unmanifested Waste Report' and include the following information:

(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 and facility received;
(e) The method of treatment, storage, or disposal for each hazardous waste;
(f) The certification signed by the owner or operator of the facility or his authorized representative; and
(g) A brief explanation of why the waste was unmanifested, if known.

[Comment: Small quantities of hazardous waste are excluded from regulation under this Part and do not require a manifest. Where a facility receives unmanifested hazardous wastes, the Agency suggests that the owner or operator obtain from each generator a certification that the waste qualifies for exclusion. Otherwise, the Agency suggests that the owner or operator file an unmanifested waste report for the hazardous waste movement.]

264.77 Additional reports.

In addition to submitting the biennial reports and unmanifested waste reports described in Section 264.75 and 264.76, the owner or operator must also report to the Regional Administrator:

(a) Releases, fires, and explosions as specified in Section 264.56(j);
(b) Facility closures specified in Section 264.115; and
(c) As otherwise required by Subparts F, K through N, AA, BB, and CC of this part.

(g) 40 CFR 264.90 through 264.101 (Subpart F), "Releases From Solid Waste Management Units", are incorporated by reference including subsequent amendments and editions. For the purpose of this incorporation by reference "January 26, 1983" shall be substituted for "July 26, 1982" contained in 40 CFR 264.90(a)(2).

SUBPART F - RELEASES FROM SOLID WASTE MANAGEMENT UNITS

264.90. Applicability.

(a) (1) Except as provided in paragraph (b) of this section, the regulations in this subpart apply to owners or operators of facilities that treat, store or dispose of hazardous waste. The owner or operator must satisfy the requirements identified in paragraph (a)(2) of this section for all wastes (or constituents thereof) contained in solid waste management units at the facility, regardless of the time at which waste was placed in such units.

(2) All solid waste management units must comply with the requirements in section 264.101. A surface impoundment, waste pile, and land treatment unit or landfill that receives hazardous waste after January 26, 1983 (hereinafter referred to as a "regulated unit") must comply with the requirements of Sections 264.91 through 264.100 in lieu of section 264.101 for purposes of detecting, characterizing and responding to releases to the uppermost aquifer. The financial responsibility requirements of Section 264.101 apply to regulated units.

(b) The owner or operator's regulated unit or units are not subject to regulation for releases into the uppermost aquifer under this subpart if:

(1) The owner or operator is exempted under section 264.1; or

(2) He operates a unit which the Regional Administrator finds:

(i) Is an engineered structure,

(ii) Does not receive or contain liquid waste or waste containing free liquids,

(iii) Is designed and operated to exclude liquid, precipitation, and other run-on and run-off,

(iv) Has both inner and outer layers of containment enclosing the waste,

(v) Has a leak detection system built into each containment layer,

(vi) The owner or operator will provide continuing operation and maintenance of these leak detection systems during the active life of the unit and the closure and post-closure care periods, and

(vii) To a reasonable degree of certainty, will not allow hazardous constituents to migrate beyond the outer containment layer prior to the end of the post-closure care period.

(3) The Regional Administrator finds, pursuant to Section 264.280(d), that the treatment zone of a land treatment unit that qualifies as a regulated unit does not contain levels of hazardous constituents that are above background levels of those constituents by an amount that is statistically significant, and if an unsaturated zone monitoring program meeting the requirements of Section 264.278 has not shown a statistically significant increase in hazardous constituents below the treatment zone during the operating life of the unit. An exemption under this paragraph can only relieve an owner or operator of responsibility to meet the requirements of this subpart during the post-closure care period; or

(4) The Regional Administrator finds that there is no potential for migration of liquid from a regulated unit to the uppermost aquifer during the active life of the regulated unit (including the closure period) and the post-closure care period specified under Section 264.117. This demonstration must be certified by a qualified geologist or geotechnical engineer. In order to provide an adequate margin of safety in the prediction of potential migration of liquid, the owner or operator must base any predictions made under this paragraph on assumptions that maximize the rate of liquid migration.

(5) He designs and operates a pile in compliance with Section 264.250(c).

(c) The regulations under this subpart apply during the active life of the regulated unit (including the closure period). After closure of the regulated unit, the regulations in this subpart:

(1) Do not apply if all waste, waste residues, contaminated containment system components, and contaminated subsoils are removed or decontaminated at closure;

(2) Apply during the post-closure care period under Section 264.117 if the owner or operator is conducting a detection monitoring program under Section 264.98, or

(3) Apply during the compliance period under Section 264.96 if the owner or operator is conducting a compliance monitoring program under Section 264.99 or a corrective action program under Section 264.100.

(d) Regulations in this subpart may apply to miscellaneous units when necessary to comply with Sections 264.601 through 264.603.

264.91 Required programs.

(a) Owners and operators subject to this subpart must conduct a monitoring and response program as follows:
  (1) Whenever hazardous constituents under Section 264.93 from a regulated unit are detected at a compliance point under Section 264.95 the owner or operator must institute a compliance monitoring program under Section 264.99. Detected is defined as statistically significant evidence of contamination as described in Section 264.98(f);
  (2) Whenever the ground-water protection standard under Section 264.92 is exceeded, the owner or operator must institute a corrective action program under Section 264.100: Exceeded is defined as statistically significant evidence of increased contamination as described in Section 264.99(d);
  (3) Whenever hazardous constituents under Section 264.93 from a regulated unit exceed concentration limits under Section 264.94 in ground water between the compliance point under Section 264.95 and the downgradient facility property boundary, the owner or operator must institute a corrective action program under Section 264.100; or
  (4) In all other cases, the owner or operator must institute a detection monitoring program under Section 264.98.

(b) The Regional Administrator will specify in the facility permit the specific elements of the monitoring and response program. The Regional Administrator may include one or more of the programs identified in paragraph (a) of this section in the facility permit as may be necessary to protect human health and the environment and will specify the circumstances under which each of the programs will be required. In deciding whether to require the owner or operator to be prepared to institute a particular program, the Regional Administrator will consider the potential adverse effects on human health and the environment that might occur before final administrative action on a permit modification application to incorporate such a program could be taken.

264.92 Ground-water protection standard.

The owner or operator must comply with conditions specified in the facility permit that are designed to ensure that hazardous constituents under Section 264.93 detected in the ground water from a regulated unit do not exceed the concentration limits under Section 264.94 in the uppermost aquifer underlying the waste management area beyond the point of compliance under Section 264.95 during the compliance period under Section 264.96. The Regional Administrator will establish this ground-water protection standard in the facility permit when hazardous constituents have been detected in the ground water.

264.93 Hazardous constituents.

(a) The Regional Administrator will specify in the facility permit the hazardous constituents to which the ground-water protection standard of Section 264.92 applies. Hazardous constituents are constituents identified in Appendix VIII of Part 261 of this chapter that have been detected in ground water in the uppermost aquifer underlying a regulated unit and that are reasonably expected to be in or derived from waste contained in a regulated unit, unless the Regional Administrator has excluded them under paragraph(b) of this section:

(b) The Regional Administrator will exclude an Appendix VIII constituent from the list of hazardous constituents specified in the facility permit if he finds that the constituent is not capable of posing a substantial present or potential hazard to human health or the environment. In deciding whether to grant an exemption, the Regional Administrator will consider the following:
  (1) Potential adverse effects on ground-water quality, considering:
    (i) The physical and chemical characteristics of the waste in the regulated unit, including its potential for migration;
    (ii) The hydrogeological characteristics of the facility and surrounding land:
    (iii) The quantity of ground water and the direction of ground-water flow:
    (iv) The proximity and withdrawal rates of ground-water users;
    (v) The current and future uses of ground water in the area;
    (vi) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground-water quality;
    (vii) The potential for health risks caused by human exposure to waste constituents:
    (viii) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;
    (ix) The persistence and permanence of the potential adverse effects; and

(2) Potential adverse effects on hydraulically-connected surface water quality, considering:
  (i) The volume and physical and chemical characteristics of the waste in the regulated unit:
  (ii) The hydrogeological characteristics of the facility and surrounding land:
  (iii) The quantity and quality of ground water, and the direction of ground-water flow:
  (iv) The patterns of rainfall in the region:
  (v) The proximity of the regulated unit to surface waters:
  (vi) The current and future uses of surface waters in the area and any water quality standards established for those surface waters:
  (vii) The existing quality of surface-water, including other sources of contamination and the cumulative impact on surface water quality;
  (viii) The potential for health risks caused by human exposure to waste constituents:
  (ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and
  (x) The persistence and permanence of the potential adverse effects:

(c) In making any determination under paragraph (b) of this section about the use of ground water in the area around the facility, the Regional Administrator will consider any identification of underground sources of drinking water and exempted aquifers made under Section 144.8 of this chapter.

264.94. Concentration limits.

(a) The Regional Administrator will specify in the facility permit concentration limits in the ground water for hazardous constituents established under Section 264.93. The concentration of a hazardous constituent.
  (1) Must not exceed the background level of that constituent in the ground water at the time that limit is specified in the permit, or
  (2) For any of the constituents listed in Table 1, must not exceed the respective value given in that Table if the background level of the constituent is below the value given in Table 1; or

TABLE 1 -- MAXIMUM CONCENTRATION OF CONSTITUENTS FOR GROUND-WATER PROTECTION:

Constituent	Maximum Concentration[1]
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium	0.05
Lead	0.05
Mercury	0.002
Selenium	0.01
Silver	0.05
Endrin (1,2,3,4,10,10-hexachloro-1,7-epoxy-1,4,4a,5,6,7,8,9a-octahydro-1, 4-endo; endo-5,8-dimethano naphthalene)	0.0002
Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer)	0.004
Methoxychlor (1,1,1-Trichloro-2,2 bis (p-methoxy-phenylethane)	0.1
Toxaphene $C_{10}H_{10}Cl_{10}$ Technical chlorinated camphene, 67-69 percent chlorine)	0.005
2,4-D (2,4-Dichlorophenoxyacetic acid)	0.1
2,4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid)	0.01

[1]Milligrams per liter.

(3) Must not exceed an alternate limit established by the Regional Administrator under paragraph (b) of this section.

(b) The Regional Administrator will establish an alternate concentration limit for a hazardous constituent if he finds that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded. In establishing alternate concentration limits, the Regional Administrator will consider the following factors:

(1) Potential adverse effects on ground-water quality, considering:

(i) The physical and chemical characteristics of the waste in the regulated unit, including its potential for migration:

(ii) The hydrogeological characteristics of the facility and surrounding land:

(iii) The quantity of ground water and the direction of ground-water flow;

(iv) The proximity and withdrawal rates of ground-water users:

(v) The current and future uses of ground water in the area;

(vi) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground-water quality;

(vii) The potential for health risks caused by human exposure to waste constituents;

(viii) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents:

(ix) The persistence and permanence of the potential adverse effects; and

(2) Potential adverse effects on hydraulically-connected surface-water quality, considering:

(i) The volume and physical and chemical characteristics of the waste in the regulated unit;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity and quality of ground water, and the direction of ground-water flow;

(iv) The patterns of rainfall in the region;

(v) The proximity of the regulated unit to surface waters ;

(vi) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;

(vii) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality;

(viii) The potential for health risks caused by human exposure to waste constituents;

(ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

(x) The persistence and permanence of the potential adverse effects.

(c) In making any determination under paragraph (b) of this section about the use of ground water in the area around the facility the Regional Administrator will consider any identification of underground sources of drinking water and exempted aquifers made under Section 144.8 of this chapter.

264.95 Point of compliance.

(a) The Regional Administrator will specify in the facility permit the point of compliance at which the ground-water protection standard of Section 264.92 applies and at which monitoring must be conducted. The point of compliance is a vertical surface located at the hydraulically down-gradient limit of the waste management area that extends down into the uppermost aquifer underlying the regulated units.

(b) The waste management area is the limit projected in the horizontal plane of the area on which waste will be placed during the active life of a regulated unit.

(1) The waste management area includes horizontal space taken up by any liner, dike, or other barrier designed to contain waste in a regulated unit.

(2) If the facility contains more than one regulated unit, the waste management area is described by an imaginary line circumscribing the several regulated units.

264.96 Compliance period.

(a) The Regional Administrator will specify in the facility permit the compliance period during which the ground-water protection standard of Section 264.92 applies. The compliance period is the number of years equal to the active life of the waste management area (including any waste management activity prior to permitting, and the closure period.)

(b) The compliance period begins when the owner or operator initiates a compliance monitoring program meeting the requirements of Section 264.99.

(c) If the owner or operator is engaged in a corrective action program at the end of the compliance period specified in paragraph (a) of this section, the compliance period is extended until the owner or operator can demonstrate that the ground-water protection standard of Section 264.92 has not been exceeded for a period of three consecutive years.

264.97 General ground-water monitoring requirements.

The owner or operator must comply with the following requirements for any ground-water monitoring program developed to satisfy Section 264.98, 264.99, or 264.100:

(a) The ground-water monitoring system must consist of a sufficient number of wells, installed at appropriate locations and depths to yield ground-water samples from the uppermost aquifer that:

(1) Represent the quality of background water that has not been affected by leakage from a regulated unit:
(i) A determination of background quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:
(A) Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; and
(B) Sampling at other wells will provide an indication of background ground-water quality that is representative or more representative than that provided by the upgradient wells; and
(2) Represent the quality of ground water passing the point of compliance.
(3) Allow for the detection of contamination when hazardous waste or hazardous constituents have migrated from the waste management area to the uppermost aquifer.

(b) If a facility contains more than one regulated unit, separate ground-water monitoring systems are not required for each regulated unit, provided that provisions for sampling the ground water in the uppermost aquifer will enable detection and measurement at the compliance point of hazardous constituents from the regulated units that have entered the ground water in the uppermost aquifer.

(c) All monitoring wells must be cased in a manner that maintains the integrity of the monitoring-well bore hole. This casing must be screened or perforated and packed with gravel or sand where necessary, to enable collection of ground-water samples. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the ground water.

(d) The ground-water monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide a reliable indication of ground-water quality below the waste management area. At a minimum the program must include procedures and techniques for:
(1) Sample collection;
(2) Sample preservation and shipment;
(3) Analytical procedures; and
(4) Chain of custody control.

(e) The ground-water monitoring program must include sampling and analytical methods that are appropriate for ground-water sampling and that accurately measure hazardous constituents in ground-water samples.

(f) The ground-water monitoring program must include a determination of the ground-water surface elevation each time ground water is sampled.

(g) In detection monitoring or where appropriate in compliance monitoring, data on each hazardous constituent specified in the permit will be collected from background wells and wells at the compliance point(s). The number and kinds of samples collected to establish background shall be appropriate for the form of statistical test employed, following generally accepted statistical principles. The sample size shall be as large as necessary to ensure with reasonable confidence that a contaminant release to ground water from a facility will be detected. The owner or operator will determine an appropriate sampling procedure and interval for each hazardous constituent listed in the facility permit which shall be specified in the unit permit upon approval by the Regional Administrator. This sampling procedure shall be:
(1) A sequence of at least four samples, taken at an interval that assures, to the greatest extent technically feasible, that an independent sample is obtained, by reference to the uppermost aquifer's effective porosity, hydraulic conductivity, and hydraulic gradient, and the fate and transport characteristics of the potential contaminants, or
(2) An alternate sampling procedure proposed by the owner or operator and approved by the Regional Administrator.

(h) The owner or operator will specify one of the following statistical methods to be used in evaluating ground-water monitoring data for each hazardous constituent which, upon approval by the Regional Administrator, will be specified in the unit permit. The statistical test chosen shall be conducted separately for each hazardous

constituent in each well. Where practical quantification limits (pql's) are used in any of the following statistical procedures to comply with Section 264.97(i)(5), and the pql must be proposed by the owner or operator and approved by the Regional Administrator. Use of any of the following statistical methods must be protective of human health and the environment and must comply with the performance standards outlined in paragraph (i) of this section.

(1) A parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each constituent.

(2) An analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each constituent.

(3) A tolerance or prediction interval procedure in which an interval for each constituent is established from the distribution of the background data, and the level of each constituent in each compliance well is compared to the upper tolerance or prediction limit.

(4) A control chart approach that gives control limits for each constituent.

(5) Another statistical test method submitted by the owner or operator and approved by the Regional Administrator.

(i) Any statistical method chosen under Section 264.97(h) for specification in the unit permit shall comply with the following performance standards, as appropriate:

(1) The statistical method used to evaluate ground-water monitoring data shall be appropriate for the distribution of chemical parameters or hazardous constituents. If the distribution of the chemical parameters or hazardous constituents is shown by the owner or operator to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the constituents differ, more than one statistical method may be needed.

(2) If an individual well comparison procedure is used to compare an individual compliance well constituent concentration with background constituent concentrations or a ground-water protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type I experimentwise error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals or control charts.

(3) If a control chart approach is used to evaluate ground-water monitoring data, the specific type of control chart and its associated parameter values shall be proposed by the owner or operator and approved by the Regional Administrator if he or she finds it to be protective of human health and the environment.

(4) If a tolerance interval or a prediction interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be proposed by the owner or operator and approved by the Regional Administrator if he or she finds these parameters to be protective of human health and the environment. These parameters will be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each constituent of concern.

(5) The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantification limit (pql) approved by the Regional Administrator under Section 264.97(h) that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.

(6) If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.

(j) Ground-water monitoring data collected in accordance with paragraph (g) of this section including actual levels of constituents must be maintained in the facility operating record. The Regional Administrator will specify in the permit when the data must be submitted for review.

264.98 Detection monitoring program.

An owner or operator required to establish a detection monitoring program under this subpart must, at a minimum, discharge the following responsibilities:

(a) The owner or operator must monitor for indicator parameters (e.g.), specific conductance, total organic carbon, or total organic halogen), waste constituents, or reaction products that provide a reliable indication of the presence of hazardous constituents in ground water. The Regional Administrator will specify the parameters or constituents to be monitored in the facility permit, after considering the following factors:

(1) The types, quantities and concentrations of constituents in wastes managed at the regulated unit:
(2) The mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the waste management area;
(3) The detectability of indicator parameters, waste constituents, and reaction products in ground water; and
(4) The concentrations or values and coefficients of variation of proposed monitoring parameters or constituents in the ground-water background.

(b) The owner or operator must install a ground-water monitoring system at the compliance point as specified under Section 264.95. The ground-water monitoring system must comply with Section 264.97(a)(2); (b), and (c).

(c) The owner or operator must conduct a ground-water monitoring program for each chemical parameter and hazardous constituent specified in the permit pursuant to paragraph (a) of this section in accordance with Section 264.97(g). The owner or operator must maintain a record of ground-water analytical data as measured and in a form necessary for the determination of statistical significance under Section 264.97(h).

(d) The Regional Administrator will specify the frequencies for collecting samples and conducting statistical tests to determine whether there is statistically significant evidence of contamination for any parameter or hazardous constituent specified in the permit under paragraph (a) of this section in accordance with Section 264.97(g). A sequence of at least four samples from each well (background and compliance wells) must be collected at least semi-annually during detection monitoring.

(e) The owner or operator must determine the ground-water flow rate and direction in the uppermost aquifer at least annually.

(f) The owner or operator must determine whether there is statistically significant evidence of contamination for any chemical parameter of hazardous constituent specified in the permit pursuant to paragraph (a) of this section at a frequency specified under paragraph (d) of this section.
(1) In determining whether statistically significant evidence of contamination exists, the owner or operator must use the method(s) specified in the permit under Section 264.97(h). These method(s) must compare data collected at the compliance point(s) to the background ground-water quality data.
(2) The owner or operator must determine whether there is statistically significant evidence of contamination at each monitoring well as the compliance point within a reasonable period of time after completion of sampling. The Regional Administrator will specify in the facility permit what period of time is reasonable, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of ground-water samples.

(g) If the owner or operator determines pursuant to paragraph (f) of this section that there is statistically significant evidence of contamination for chemical parameters or hazardous constituents specified pursuant to paragraph (a) of this section at any monitoring well at the compliance point, he or she must:
(1) Notify the Regional Administrator of this finding in writing within seven days. The notification must indicate what chemical parameters or hazardous constituents have shown statistically significant evidence of contamination;
(2) Immediately sample the ground water in all monitoring wells and determine whether constituents in the list of Appendix IX of Part 264 are present, and if so, in what concentration.
(3) For any Appendix IX compounds found in the analysis pursuant to paragraph (g)(2) of this section, the owner or operator may resample within one month and repeat the analysis for those compounds detected. If the results of the second analysis confirm the initial results, then these constituents will form the basis for compliance monitoring. If the owner or operator does not resample for the compounds found pursuant to paragraph (g)(2) of this section, the hazardous constituents found during this initial Appendix IX analysis will form the basis for compliance monitoring.
(4) Within 90 days, submit to the Regional Administrator an application for a permit modification to establish a compliance monitoring program meeting the requirements of Section 264.99. The application must include the following information:
(i) An identification of the concentration or any Appendix IX constituent detected in the ground water at each monitoring well at the compliance point;
(ii) Any proposed changes to the ground-water monitoring system at the facility necessary to meet the requirements of Section 264.99;
(iii) Any proposed additions or changes to the monitoring frequency, sampling and analysis procedures or methods, or statistical methods used at the facility necessary to meet the requirements of Section 264.99;
(iv) For each hazardous constituent detected at the compliance point, a proposed concentration limit under Section 264.94(a)(1) or (2), or a notice of intent to seek an alternate concentration limit under Section 264.94(b); and
(5) Within 180 days, submit to the Regional Administrator:
(i) All data necessary to justify an alternate concentration limit sought under Section 264.94(b); and

(ii) An engineering feasibility plan for a corrective action program necessary to meet the requirement of Section 264.100, unless:

(A) All hazardous constituents identified under paragraph (g)(2) of this section are listed in Table 1 of Section 264.94 and their concentrations do not exceed the respective values given in that Table; or

(B) The owner or operator has sought an alternate concentration limit under Section 264.94(b) for every hazardous constituent identified under paragraph (g)(2) of this section.

(6) If the owner or operator determines, pursuant to paragraph (f) of this section, that there is a statistically significant difference for chemical parameters or hazardous constituents specified pursuant to paragraph (a) of this section at any monitoring well at the compliance point, he or she may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the ground water. The owner operator may make a demonstration under this paragraph in addition to, or in lieu of, submitting a permit modification application under paragraph (g)(4) of this section; however, the owner or operator is not relieved of the requirement to submit a permit modification application within the time specified in paragraph (g)(4) of this section unless the demonstration made under this paragraph successfully shows that a source other than a regulated unit caused the increase, or that the increase resulted from error in sampling, analysis, or evaluation. In making a demonstration under this paragraph, the owner or operator must:

(i) Notify the Regional Administrator in writing within seven days of determining statistically significant evidence of contamination at the compliance point that he intends to make a demonstration under this paragraph;

(ii) Within 90 days, submit a report to the Regional Administrator which demonstrates that a source other than a regulated unit caused the contamination or that the contamination resulted from error in sampling, analysis, or evaluation;

(iii) Within 90 days, submit to the Regional Administrator an application appropriate changes to the detection monitoring program facility; and

(iv) Continue to monitor in accordance with the detection monitoring program established under this section.

(h) If the owner or operator determines that the detection monitoring program no longer satisfies the requirements of this section, he or she must, within 90 days, submit an application for a permit modification to make any appropriate changes to the program.

264.99 Compliance monitoring program.

An owner or operator required to establish a compliance monitoring program under this subpart must, at a minimum, discharge the following responsibilities:

(a) The owner or operator must monitor the ground water to determine whether regulated units are in compliance with the ground-water protection standard under Section 264.92. The Regional Administrator will specify the ground-water protection standard in the facility permit including:

(1) A list of the hazardous constituents identified under Section 264.93;

(2) Concentration limits under Section 264.94 for each of those hazardous constituents;

(3) The compliance point under Section 264.95; and

(4) The compliance period under Section 264.96.

(b) The owner or operator must install a ground-water monitoring system at the compliance point as specified under Section 264.95. The ground-water monitoring system must comply with Section 264.97(a)(2), (b), and (c).

(c) The Regional Administrator will specify the sampling procedures and statistical methods appropriate for the constituents and the facility, consistent with Section 264.97(g) and (h).

(1) The owner or operator must conduct a sampling program for each chemical parameter or hazardous constituent in accordance with Section 264.97(g).

(2) The owner or operator must record ground-water analytical data as measured and in form necessary for the determination of statistical significance under Section 264.97(h) for the compliance period of the facility.

(d) The owner or operator must determine whether there is statistically significant evidence of increased contamination for any chemical parameter or hazardous constituent specified in the permit, pursuant to paragraph (a) of this section, at a frequency specified under paragraph (f) under this section.

(1) In determining whether statistically significant evidence of increased contamination exists, the owner or operator must use the method(s) specified in the permit under Section 264.97(h). The method(s) must compare data collected at the compliance point(s) to a concentration limit developed in accordance with Section 264.94.

(2) The owner or operator must determine whether there is statistically significant evidence of increased contamination at each monitoring well at the compliance point within a reasonable time period after completion of sampling. The Regional Administrator will specify that time period in the facility permit, after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of ground-water samples.

(e) The owner or operator must determine the ground-water flow rate and direction in the uppermost aquifer at least annually.

(f) The Regional Administrator will specify the frequencies for collecting samples and conducting statistical tests to determine statistically significant evidence of increased contamination in accordance with Section 264.97(g). A sequence of at least four samples from each well (background and compliance wells) must be collected at least semi-annually during the compliance period of the facility.

(g) The owner or operator must analyze samples from all monitoring wells at the compliance point for all constituents contained in Appendix IX of Part 264 at least annually to determine whether additional hazardous constituents are present in the uppermost aquifer and, if so, at what concentration, pursuant to procedures in Section 264.98(f). If the owner or operator finds Appendix IX constituents in the ground water that are not already identified in the permit as monitoring constituents, the owner or operator may resample within one month and repeat the Appendix IX analysis. If the second analysis confirms the presence of new constituents, the owner or operator must report the concentration of these additional constituents to the Regional Administrator within seven days after the completion of the second analysis and add them to the monitoring list. If the owner or operator chooses not to resample, then he or she must report the concentrations of these additional constituents to the Regional Administrator within seven days after completion of the initial analysis and add them to the monitoring list.

(h) If the owner or operator determines pursuant to paragraph (d) of this section that any concentration limits under Section 264.94 are being exceeded at any monitoring well at the point of compliance he or she must:

(1) Notify the Regional Administrator of this finding in writing within seven days. The notification must indicate what concentration limits have been exceeded.

(2) Submit to the Regional Administrator an application for a permit modification to establish a corrective action program meeting the requirements of Section 264.100 within 180 days, or within 90 days if an engineering feasibility study has been previously submitted to the Regional Administrator under Section 264.98(h)(5). The application must at a minimum include the following information:

(i) A detailed description of corrective actions that will achieve compliance with the ground-water protection standard specified in the permit under paragraph (a) of this section; and

(ii) A plan for a ground-water monitoring program that will demonstrate the effectiveness of the corrective action. Such a ground-water monitoring program may be based on a compliance monitoring program developed to meet the requirements of this section.

(i) If the owner or operator determines, pursuant to paragraph (d) of this section, that the ground-water concentration limits under this section are being exceeded at any monitoring well at the point of compliance, he or she may demonstrate that a source other than a regulated unit caused the contamination or that the detection is an artifact caused by an error in sampling, analysis, or statistical evaluation or natural variation in the ground water. In making a demonstration under this paragraph, the owner or operator must:

(1) Notify the Regional Administrator in writing within seven days that he intends to make a demonstration under this paragraph:

(2) Within 90 days, submit a report to the Regional Administrator which demonstrates that a source other than a regulated unit caused the standard to be exceeded or that the apparent noncompliance with the standards resulted from error in sampling, analysis, or evaluation;

(3) Within 90 days, submit to the Regional Administrator an application for a permit modification to make any appropriate changes to the compliance monitoring program at the facility; and

(4) Continue to monitor in accord with the compliance monitoring program established under this section:

(j) If the owner or operator determines that the compliance monitoring program no longer satisfies the requirements of this section, he must within 90 days, submit an application for a permit modification to make any appropriate changes to the program.

264.100 Corrective action program.

An owner or operator required to establish a corrective action program under this subpart must, at a minimum discharge the following responsibilities:

(a) The owner or operator must take corrective action to ensure that regulated units are in compliance with the ground-water protection standard under Section 264.92. The Regional Administrator will specify the ground-water protection standard in the facility permit, including:

(1) A list of the hazardous constituents identified under Section 264.93;

(2) Concentration limits under Section 264.94 for each of those hazardous constituents;
(3) The compliance point under Section 264.95; and
(4) The compliance period under Section 264.96.

(b) The owner or operator must implement a corrective action program that prevents hazardous constituents, from exceeding their respective concentration limits at the compliance point by removing the hazardous waste constituents or treating them in place. The permit will specify the specific measures that will be taken.

(c) The owner or operator must begin corrective action within a reasonable time period after the groundwater protection standard is exceeded. The Regional Administrator will specify that time period in the facility permit. If a facility permit includes a corrective action program in addition to a compliance monitoring program, the permit will specify when the corrective action will begin and such a requirement will operate in lieu of Section 264.99(i)(2).

(d) In conjunction with a corrective action program, the owner or operator must establish and implement a groundwater monitoring program to demonstrate the effectiveness of the corrective action program. Such a monitoring program may be based on the requirements for a compliance monitoring program under Section 264.99 and must be as effective as that program in determining compliance with the groundwater protection standard under Section 264.92 and in determining the success of a corrective action program under paragraph (e) of this section, where appropriate.

(e) In addition to the other requirements of this section, the owner or operator must conduct a corrective action program to remove or treat in place any hazardous constituents under Section 264.93 that exceed concentration limits under Section 264.94 in groundwater:
(1) Between the compliance point under Section 264.95 and the downgradient property boundary; and
(2) Beyond the facility boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the Regional Administrator that, despite the owner's or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis.
(3) Corrective action measures under this paragraph must be initiated and completed within a reasonable period time considering the extent of contamination.
(4) Corrective action measures under this paragraph may be terminated once the concentration of hazardous constituents under Section 264.93 is reduced to levels below their respective concentration limits under Section 264.94.

(f) The owner or operator must continue corrective action measures during the compliance period to the extent necessary to ensure that the groundwater protection standard is not exceeded. If the owner or operator is conducting corrective action at the end of the compliance period, he must continue that corrective action for as long as necessary to achieve compliance with the ground-water protection standard. The owner or operator may terminate corrective action measures taken beyond the period equal to the active life of the waste management area (including the closure period) if he can demonstrate, based on data from the groundwater monitoring program under paragraph (d) of this section, that the groundwater protection standard of Section 264.92 has not been exceeded for a period of three consecutive years.

(g) The owner or operator must report in writing to the Regional Administrator on the effectiveness of the corrective action program. The owner or operator must submit these reports semiannually.

(h) If the owner or operator determines that the corrective action program no longer satisfies the requirements of this section, he must, within 90 days, submit an application for a permit modification to make any appropriate changes to the program.

264.101 Corrective action for solid waste management units.

(a) The owner or operator of a facility seeking a permit for the treatment, storage or disposal of hazardous waste must institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any solid waste management unit at the facility, regardless of the time at which waste was placed in such unit.

(b) Corrective action will be specified in the permit in accordance with this section and subpart S of this part. The permit will contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to issuance of the permit) and assurances of financial responsibility for completing such corrective action.

(c) The owner or operator must implement corrective actions beyond the facility property boundary, where necessary to protect human health and the environment, unless the owner or operator demonstrates to the satisfaction of the Regional Administrator that, despite the owner's or operator's best efforts, the owner or operator was unable to

obtain the necessary permission to undertake such actions. The owner/operator is not relieved of all responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis. Assurances of financial responsibility for such corrective action must be provided.

(h) 40 CFR 264.110 through 264.120 (Subpart G), "Closure and Post-Closure", are incorporated by reference including subsequent amendments and editions.

SUBPART G - CLOSURES AND POST-CLOSURE

264.110 Applicability.

Except as Section 264.1 provides otherwise:

(a) Sections 264.111-264.115 (which concern closure) apply to the owners and operators of all hazardous waste management facilities; and
(b) Sections 264.116-264.120 (which concern post-closure care) apply to the owners and operators of:
  (1) All hazardous waste disposal facilities;
  (2) Waste piles and surface impoundments from which the owner or operator intends to remove the wastes at closure to the extent that these sections are made applicable to such facilities in Sections 264.228 or 264.258;
  (3) Tank systems that are required under 264.197 to meet the requirements for landfills; and
  (4) Containment buildings that are required under Section 264.1102 to meet the requirement for landfills.

264.111 Closure performance standard.

The owner or operator must close the facility in a manner that:
(a) Minimizes the need for further maintenance; and
(b) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere; and
(c) Complies with the closure requirements of this subpart including, but not limited to, the requirements of Sections 264.178, 264.197, 264.228, 264.258, 264.280, 264.310 and 264.351, and 264.601 through 264.603 and 264.1102.

264.112 Closure plan; amendment of plan.

(a) Written plan.
  (1) The owner or operator of a hazardous waste management facility must have a written closure plan. In addition, certain surface impoundments and waste piles from which the owner or operator intends to remove or decontaminate the hazardous waste at partial or final closure are required by Sections 264.228(c)(1)(i) and 264.258(c)(1)(i) to have contingent closure plans. The plan must be submitted with the permit application in accordance with Sections 270.14(b)(13) of this chapter, and approved by the Regional Administrator as part of the permit issuance procedures under Part 124 of this chapter. In accordance with Section 270.32 of this chapter, the approved closure plan will become a condition of any RCRA permit.
  (2) The Director's approval of the plan must ensure that the approved closure plan is consistent with Sections 264.111 through 264.115 and the applicable requirements of subpart F of this part Sections 264.178, 264.197, 264.228, 264.258, 264.280, 264.310, 264.351 and 264.601, and 264.1102. Until final closure is completed and certified in accordance with Section 264.115, a copy of the approved plan and all approved revisions must be furnished to the Director upon request, including requests by mail.
(b) Content of plan. The plan must identify steps necessary to perform partial and/or final closure of the facility at any point during its active life. The closure plan must include, at least:
  (1) A description of how each hazardous waste management unit at the facility will be closed in accordance with Section 264.111;
  (2) A description of how final closure of the facility will be conducted in accordance with Section 264.111. The description must identify the maximum extent of the operations which will be unclosed during the active life of the facility; and
  (3) An estimate of the maximum inventory of hazardous wastes ever on-site over the active life of the facility and a detailed description of the methods to be used during partial closures and final closure including, but not limited to, methods for removing, transporting, treating, storing, or disposing of all hazardous wastes,

and identification of the type(s) of the off-site hazardous waste management units to be used, if applicable; and

(4) A detailed description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated containment system components, equipment, structures, and soils during partial and final closure, including, but not limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination required to satisfy the closure performance standard; and

(5) A detailed description of other activities necessary during the closure period to ensure that all partial closures and final closure satisfy the closure performance standards, including, but not limited to, ground-water monitoring, leachate collection, and run-on and run-off control; and

(6) A schedule for closure of each hazardous waste management unit and for final closure of the facility. The schedule must include, at a minimum, the total time required to close each hazardous waste management unit and the time required for intervening closure activities which will allow tracking of the progress of partial and final closure. (For example, in the case of a landfill unit, estimates of the time required to treat or dispose of all hazardous waste inventory and of the time required to place a final cover must be included.)

(7) For facilities that use trust funds to establish financial assurance under Sections 264.143 or 264.145 and that are expected to close prior to the expiration of the permit, an estimate of the expected year of final closure.

(c) Amendment of plan. The owner or operator must submit a written notification of or request for a permit modification to authorize a change in operating plans, facility design, or the approved closure plan in accordance with the applicable procedures in Parts 124 and 270. The written notification or request must include a copy of the amended closure plan for review or approval by the Regional Administrator.

(1) The owner or operator may submit a written notification or request to the Regional Administrator for a permit modification to amend the closure plan at any time prior to the notification of partial or final closure of the facility;

(2) The owner or operator must submit a written notification of or request for a permit modification to authorize a change in the approved closure plan whenever:

(i) Changes in operating plans or facility design affect the closure plan; or

(ii) There is a change in the expected year of closure, if applicable, or

(iii) In conducting partial or final closure activities, unexpected events require a modification of the approved closure plan.

(3) The owner or operator must submit a written request for a permit modification including a copy of the amended closure plan for approval at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected the closure plan. If an unexpected event occurs during the partial or final closure period, the owner or operator must request a permit modification no later than 30 days after the unexpected event. An owner or operator of a surface impoundment or waste pile that intends to remove all hazardous waste at closure and is not otherwise required to prepare a contingent closure plan under Sections 264.228(c)(1)((i) or 264.258(c)(1)(i) must submit an amended closure plan to the Regional Administrator no later than 60 days from the date that the owner or operator or Regional Administrator determines that the hazardous waste management unit must be closed as a landfill, subject to the requirements of Section 264.310, or no later than 30 days from that date if the determination is made during partial or final closure. The Regional Administrator will approve, disapprove, or modify this amended plan in accordance with the procedures in Parts 124 and 270. In accordance with Section 270.32 of this chapter, the approved closure plan will become a condition of any RCRA permit issued.

(4) The Regional Administrator may request modifications to the plan under the conditions described in Section 264.112(c)(2). The owner or operator must submit the modified plan within 60 days of the Regional Administrator's request, or within 30 days if the change in facility conditions occurs during partial or final closure. Any modifications requested by the Regional Administrator will be approved in accordance with the procedures in Parts 124 and 270.

(d) Notification of partial closure and final closure.

(1) The owner or operator must notify the Regional Administrator in writing at least 60 days prior to the date on which he expects to begin closure of a surface impoundment, waste pile, land treatment or landfill unit, or final closure of a facility with such a unit. The owner or operator must notify the Regional Administrator in writing at least 45 days prior to the date on which he expects to begin final closure of a facility with only treatment or storage tanks, container storage, or incinerator units to be closed. The owner or operator must notify the Regional Administrator in writing at least 45 days prior to the date on which he expects to begin partial or final closure of a boiler or industrial furnace, whichever is earlier.

(2) The date when he "expects to begin closure" must be either:

(i) No later than 30 days after the date on which any hazardous waste management unit receives the known final volume of hazardous wastes, or if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous wastes, no later than one year after the date on which the unit received the most recent volume of hazardous wastes. If the owner or operator of a hazardous waste management unit can demonstrate to the Regional Administrator that the hazardous waste management unit or facility has the capacity to receive additional hazardous wastes and he has taken all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements, the Regional Administrator may approve an extension to this one-year limit; or

(ii) For units meeting the requirements of Section 264.113(d), no later than 30 days after the date on which the hazardous waste management unit receives the known final volume of non-hazardous wastes, or if there is a reasonable possibility that the hazardous waste management unit will receive additional non-hazardous wastes, no later than one year after the date on which the unit received the most recent volume of non-hazardous wastes. If the owner or operator can demonstrate to the Regional Administrator that the hazardous waste management unit has the capacity to receive additional non-hazardous wastes and he has taken, and will continue to take, all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements, the Regional Administrator may approve an extension to this one-year limit.

(3) If the facility's permit is terminated, of if the facility is otherwise ordered, by judicial decree or final order under Section 3008 of RCRA, to cease receiving hazardous wastes or to close, then the requirements of this paragraph do not apply. However, the owner or operator must close the facility in accordance with the deadlines established in Section 264.113.

(e) Removal of wastes and decontamination or dismantling of equipment. Nothing in this Section shall preclude the owner or operator from removing hazardous wastes and decontaminating or dismantling equipment in accordance with the approved partial or final closure plan at any time before or after notification of partial or final closure.

264.113 Closure; time allowed for closure.

(a) Within 90 days after receiving the final volume of hazardous wastes, or the final volume of non-hazardous wastes if the owner or operator complies with all applicable requirements in paragraphs (d) and (e) of this section, at a hazardous waste management unit or facility, the owner or operator must treat, remove from the unit or facility, or dispose of on-site, all hazardous wastes in accordance with the approved closure plan. The Regional Administrator may approve a longer period if the owner or operator complies with all applicable requirements for requesting a modification to the permit and demonstrates that:

(1) (i) The activities required to comply with this paragraph will, of necessity, take longer than 90 days to complete; or

(ii) (A) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes, or has the capacity to receive non-hazardous wastes if the owner or operator complies with paragraphs (d) and (e) of this section; and

(B) There is a reasonable likelihood that he or another person will recommence operation of the hazardous waste management unit or the facility within one year; and

(C) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

(2) He has taken and will continue to take all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements.

(b) The owner or operator must complete partial and final closure activities in accordance with the approved closure plan and within 180 days after receiving the final volume of hazardous wastes, or the final volume of non-hazardous wastes if the owner or operator complies with all applicable requirements in paragraphs (d) and (e) of this section, at the hazardous waste management unit or facility. The Regional Administrator may approve an extension to the closure period if the owner or operator complies with all applicable requirements for requesting a modification to the permit and demonstrates that:

(1) (i) The partial or final closure activities will, of necessity, take longer than 180 days to complete; or

(ii) (A) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes, or has the capacity to receive non-hazardous wastes if the owner or operator complies with paragraphs (d) and (e) of this section; and

(B) There is reasonable likelihood that he or another person will recommence operation of the hazardous waste management unit or the facility within one year; and

(C) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

(2) He has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed but not operating hazardous waste management unit or facility, including compliance with all applicable permit requirements.

(c) The demonstrations referred to in paragraphs (a)(1) and (b)(1) of this section must be made as follows:

(1) The demonstrations in paragraph (a)(1) of this section must be made at least 30 days prior to the expiration of the 90-day period in paragraph (a) of this section; and

(2) The demonstration in paragraph (b)(1) of this section must be made at least 30 days prior to the expiration of the 180-day period in paragraph (b) of this section, unless the owner or operator is otherwise subject to the deadlines in paragraph (d) of this section.

(d) The Regional Administrator may allow an owner or operator to receive only non-hazardous wastes in a landfill, land treatment, or surface impoundment unit after the final receipt of hazardous wastes at that unit if:

(1) The owner or operator requests a permit modification in compliance with all applicable requirements in parts 270 and 124 of this title and in the permit modification request demonstrates that:

(i) The unit has the existing design capacity as indicated on the part A application to receive non-hazardous wastes; and

(ii) There is a reasonable likelihood that the owner or operator or another person will receive non-hazardous wastes in the unit within one year after the final receipt of hazardous wastes; and

(iii) The non-hazardous wastes will not be incompatible with any remaining wastes in the unit, or with the facility design and operating requirements of the unit or facility under this part; and

(iv) Closure of the hazardous waste management unit would be incompatible with continued operation of the unit or facility; and

(v) The owner or operator is operating and will continue to operate in compliance with all applicable permit requirements; and

(2) The request to modify the permit includes an amended waste analysis plan, ground-water monitoring and response program, human exposure assessment required under RCRA section 3019, and closure and post-closure plans, and updated cost estimates and demonstrations of financial assurance for closure and post-closure care as necessary and appropriate, to reflect any changes due to the presence of hazardous constituents in the non-hazardous wastes, and changes in closure activities, including the expected year of closure if applicable under Section 264.112(b)(7), as a result of the receipt of non-hazardous wastes following the final receipt of hazardous wastes; and

(3) The request to modify the permit includes revisions, as necessary and appropriate, to affected conditions of the permit to account for the receipt of non-hazardous wastes following receipt of the final volume of hazardous wastes; and

(4) The request to modify the permit and the demonstrations referred to in paragraphs (d)(1) and (d)(2) of this section are submitted to the Regional Administrator no later than 120 days prior to the date on which the owner or operator of the facility receives the known final volume of hazardous wastes at the unit, or no later than 90 days after the effective date of this Rule in the state in which the unit is located, whichever is later.

(e) In addition to the requirements in paragraph (d) of this section, an owner or operator of a hazardous waste surface impoundment that is not in compliance with the liner and leachate collection system requirements in 42 U.S.C. 3004(o)(1) and 3005(j)(1) or 42 U.S.C. 3004(o)(2) or (3) or 3005(j) (2), (3), (4) or (13) must:

(1) Submit with the request to modify the permit:

(i) A contingent corrective measures plan, unless a corrective action plan has already been submitted under Section 264.99; and

(ii) A plan for removing hazardous wastes in compliance with paragraph (e)(2) of this section; and

(2) Remove all hazardous wastes from the unit by removing all hazardous liquids, and removing all hazardous sludges to the extent practicable without impairing the integrity of the liner(s), if any.

(3) Removal of hazardous wastes must be completed no later than 90 days after the final receipt of hazardous wastes. The Regional Administrator may approve an extension to this deadline if the owner or operator demonstrates that the removal of hazardous wastes will, of necessity, take longer than the allotted period to complete and that an extension will not pose a threat to human health and the environment.

(4) If a release that is a statistically significant increase (or decrease in the case of pH) over background values for detection monitoring parameters or constituents specified in the permit or that exceeds the facility's ground-water protection standard at the point of compliance, if applicable, is detected in accordance with the requirements in subpart F of this part, the owner or operator of the unit:

(i) Must implement corrective measures in accordance with the approved contingent corrective measures plan required by paragraph (e)(1) of this section no later than one year after detection of the release, or approval of the contingent corrective measures plan, whichever is later;

(ii) May continue to receive wastes at the unit following detection of the release only if the approved corrective measures plan includes a demonstration that continued receipt of wastes will not impede corrective action; and

(iii) May be required by the Regional Administrator to implement corrective measures in less than one year or to cease the receipt of wastes until corrective measures have been implemented if necessary to protect human health and the environment.

(5) During the period of corrective action, the owner or operator shall provide semi-annual reports to the Regional Administrator that describe the progress of the corrective action program, compile all ground-water monitoring data, and evaluate the effect of the continued receipt of non-hazardous wastes on the effectiveness of the corrective action.

(6) The Regional Administrator may require the owner or operator to commence closure of the unit if the owner or operator fails to implement corrective action measures in accordance with the approved contingent corrective measures plan within one year as required in paragraph (e)(4) of this section, or fails to make substantial progress in implementing corrective action and achieving the facility's ground-water protection standard or background levels if the facility has not yet established a ground-water protection standard.

(7) If the owner or operator fails to implement corrective measures as required in paragraph (e)(4) of this section, or if the Regional Administrator determines that substantial progress has not been made pursuant to paragraph (e)(6) of this section he shall:

(i) Notify the owner or operator in writing that the owner or operator must begin closure in accordance with the deadlines in paragraphs (a) and (b) of this section and provide a detailed statement of reasons for this determination, and

(ii) Provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments on the decision no later than 20 days after the date of the notice.

(iii) If the Regional Administrator receives no written comments, the decision will become final five days after the close of the comment period. The Regional Administrator will notify the owner or operator that the decision is final, and that a revised closure plan, if necessary, must be submitted within 15 days of the final notice and that closure must begin in accordance with the deadlines in paragraphs (a) and (b) of this section.

(iv) If the Regional Administrator receives written comments on the decision, he shall make a final decision within 30 days after the end of the comment period, and provide the owner or operator in writing and the public through a newspaper notice, a detailed statement of reasons for the final decision. If the Regional Administrator determines that substantial progress has not been made, closure must be initiated in accordance with the deadlines in paragraphs (a) and (b) of this section.

(v) The final determinations made by the Regional Administrator under paragraphs (e)(7)(iii) and (iv) of this section are not subject to administrative appeal.

264.114 Disposal or decontamination of equipment, structures, and soils.

During the partial and final closure periods, all contaminated equipment, structures and soils must be properly disposed of or decontaminated unless otherwise specified in Sections 264.228, 264.258, 264.280, or Section 264.310, or under the authority of 264.601 and 264.603. By removing any hazardous wastes or hazardous constituents during partial and final closure, the owner or operator may become a generator of hazardous waste and must handle that waste in accordance with all applicable requirements of part 262 of this chapter.

264.115 Certification of closure.

Within 60 days of completion of closure of each hazardous waste surface impoundment, waste pile, land treatment, and landfill unit, and within 60 days of the completion of final closure, the owner or operator must submit to the Regional Administrator, by registered mail, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved closure plan. The certification must be signed by the owner or operator and by an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification must be furnished to the Regional Administrator upon request until he releases the owner or operator from the financial assurance requirements for closure under Section 264.143(i).

264.116 Survey plat.

No later than the submission of the certification of closure of each hazardous waste disposal unit, the owner or operator must submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Regional Administrator, a survey plat indicating the location and dimensions of landfills cells or other hazardous waste disposal units with respect to permanently surveyed benchmarks. This plat must be prepared and certified by a professional land surveyor. The plat filed with the local zoning authority, or the authority with jurisdiction over local land use, must contain a note, prominently displayed, which states the owner's or operator's obligation to restrict disturbance of the hazardous waste disposal unit in accordance with the applicable Subpart G regulations.

264.117 Post-closure care and use of property.

(a) (1) Post-closure care for each hazardous waste management unit subject to the requirements of Sections 264.117-264.120 must begin after completion of closure of the unit and continue for 30 years after that date and must consist of at least the following:
(i) Monitoring and reporting in accordance with the requirements of Subparts F, K, L, M, N and X of this part; and
(ii) Maintenance and monitoring of waste containment systems in accordance with the requirements of Subparts F, K, L, M, N, and X of this part.
(2) Any time preceding partial closure of a hazardous waste management unit subject to post-closure care requirements of final closure, or any time during the post-closure period for a particular unit, the Regional Administrator may, in accordance with the permit modification procedures in Parts 124 and 270:
(i) Shorten the post-closure care period applicable to the hazardous waste management unit or facility, if all disposal units have been closed, if he finds that the reduced period is sufficient to protect human health and the environment (e.g., leachate or groundwater monitoring results, characteristics of the hazardous wastes, application of advanced technology, or alternative disposal, treatment, or re-use techniques indicate that the hazardous waste management unit or facility is secure); or
(ii) Extend the post-closure care period applicable to the hazardous waste management unit or facility if he finds that the extended period is necessary to protect human health and the environment (e.g., leachate or groundwater monitoring results indicate a potential for migration of hazardous wastes at levels which may be harmful to human health and the environment).

(b) The Regional Administrator may require, at partial and final closure, continuation of any of the security requirements of Section 264.14 during part or all of the post-closure period when:
(1) Hazardous wastes may remain exposed after completion of partial or final closure; or
(2) Access by the public or domestic livestock may pose a hazard to human health.

(c) Post-closure use of property on or in which hazardous wastes remain after partial or final closure must never be allowed to disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the facility's monitoring systems, unless the Regional Administrator finds that the disturbance:
(1) Is necessary to the proposed use of the property, and will not increase the potential hazard to human health or the environment; or
(2) Is necessary to reduce a threat to human health or the environment.

(d) All post-closure care activities must be in accordance with the provisions of the approved post-closure plan as specified in Section 264.118.

264.118 Post-closure plan; amendment of plan.

(a) Written Plan. The owner or operator of a hazardous waste disposal unit must have a written post-closure plan. In addition, certain surface impoundments and waste piles from which the owner or operator intends to remove or decontaminate the hazardous wastes at partial or final closure are required by Sections 264.228(c)(1)(ii) and 264.258(c)(1)(ii) to have contingent post-closure plans. Owners or operators of surface impoundments and waste piles not otherwise required to prepare contingent post-closure plans under Sections 264.228(c)(1)(ii) and 264.258(c)(1)(ii) must submit a post-closure plan to the Regional Administrator within 90 days from the date that the owner or operator or Regional Administrator determines that the hazardous waste management unit must be closed as a landfill, subject to the requirements of Sections 264.117-264.120. The plan must be submitted with the permit application, in accordance with Section 270.14(b)13) of this chapter, and approved by the regional

Administrator as part of the permit issuance procedures under Part 124 of this chapter, and approved by the Regional Administrator as part of the permit issuance procedures under Part 124 of this chapter. In accordance with Section 270.32 of this chapter, the approved post-closure plan will become a condition of any RCRA permit issued.

(b) For each hazardous waste management unit subject to the requirements of this section, the post-closure plan must identify the activities that will be carried on after closure of each disposal unit and the frequency of these activities, and include at least:

(1) A description of the planned monitoring activities and frequencies at which they will be performed to comply with Subparts F, K, L, M, N and X of this part during the post-closure care period; and

(2) A description of the planned maintenance activities, and frequencies at which they will be performed, to ensure:

(i) The integrity of the cap and final cover or other containment systems in accordance with the requirements of Subparts F, K, L, M, N, and X of this part; and

(ii) The function of the monitoring equipment in accordance with the requirements of Subparts F, K, L, M, N and X of this Part; and

(3) The name, address, and phone number of the person or office to contact about the hazardous waste disposal unit or facility during the post-closure care period.

(c) Until final closure of the facility, a copy of the approved post-closure plan must be furnished to the Regional Administrator upon request, including request by mail. After final closure has been certified, the person or office specified in Section 264.188(b)(3) must keep the approved post-closure plan during the remainder of the post-closure period.

(d) Amendment of plan. The owner or operator must submit a written notification of or request for a permit modification to authorize a change in the approved port-closure plan in accordance with the applicable requirements in Parts 124 and 270. The written notification or request must include a copy of the amended post-closure plan for review or approval by the Regional Administrator.

(1) The owner or operator may submit a written notification or request to the Regional Administrator for a permit modification to amend the post-closure plan at any time during the active life of the facility or during the post-closure care period.

(2) The owner or operator must submit a written notification of or request for a permit modification to authorize a change in the approved post-closure plan whenever:

(i) Changes in operating plans or facility design affect the approved post-closure plan; or

(ii) There is a change in the expected year of final closure, if applicable; or

(iii) Events which occur during the active life of the facility, including partial and final closures, affect the approved post-closure plan.

(3) The owner or operator must submit a written request for a permit modification at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred which as affected the post-closure plan. An owner or operator of a surface impoundment or waste pile that intends to remove all hazardous waste at closure and is not otherwise required to submit a contingent post-closure plan under Sections 264.228(c)(1)(ii) and 264.258(c)(1)(ii) must submit a post-closure plan to the Regional Administrator no later than 90 days after the date that the owner or operator or Regional Administrator determines that the hazardous waste management unit must be closed as a landfill, subject to the requirements of Section 264.310. The Regional Administrator will approve, disapprove or modify this plan in accordance with the procedures in Parts 124 and 270. In accordance with Section 270.32 of this chapter, the approved post-closure plan will become a permit condition.

(4) The Regional Administrator may request modifications to the plan under the conditions described in Section 264.118(d)(2). The owner or operator must submit the modified plan no later than 60 days after the Regional Administrator's request, or no later than 90 days if the unit is a surface impoundment or waste pile not previously required to prepare a contingent post-closure plan. Any modifications requested by the Regional Administrator will be approved, disapproved, or modified in accordance with the procedures in Parts 124 and 270.

264.119 Post-Closure Notices.

(a) No later than 60 days after certification of closure of each hazardous waste disposal unit, the owner or operator must submit to the local zoning authority, or the 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. For hazardous wastes disposed of before January 12, 1981, the owner or operator must identify the type, location, and quantity of the hazardous wastes to the best of his knowledge and in accordance with any records he has kept.

(b) Within 60 days of certification of closure of the first hazardous waste disposal unit and within 60 days of certification of closure of the last hazardous waste disposal unit, the owner or operator must:

(1) Record, in accordance with State law, a notation on the deed to the facility property--or on some other instrument which is normally examined during title search--that will in perpetuity notify any potential purchaser of the property that:
(i) The land has been used to manage hazardous wastes; and
(ii) Its use is restricted under 40 CFR Subpart G regulations; and
(iii) The survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or other hazardous waste disposal unit of the facility required by Section 264.116 and Section 264.119(a) have been filed with the local zoning authority or the authority with jurisdiction over local land use and with the Regional Administrator; and

(2) Submit a certification, signed by the owner or operator, that he has recorded the notation specified in paragraph (b)(1) of this section, including a copy of the document in which the notation has been placed, to the Regional Administrator.

(c) If the owner or operator or any subsequent owner or operator of the land upon which a hazardous waste disposal unit is located wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, or contaminated soils, he must request a modification to the post-closure permit in accordance with the applicable requirements in Parts 124 and 270. The owner or operator must demonstrate that the removal of hazardous wastes will satisfy the criteria of Section 264.117(c). By removing hazardous waste, the owner or operator may become a generator of hazardous waste and must manage it in accordance with all applicable requirements of this chapter. If he is granted a permit modification or otherwise granted approval to conduct such removal activities, the owner or operator may request that the Regional Administrator approve either:
(1) The removal of the notation on the deed to the facility property or other instrument normally examined during title search; or
(2) The addition of a notation to the deed or instrument indicating the removal of the hazardous waste.

264.120 Certification of completion of post-closure care.

No later than 60 days after completion of the established post-closure care period for each hazardous waste disposal unit, the owner or operator must submit to the Regional Administrator, by registered mail, 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. The certification must be signed by the owner or operator and an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification must be furnished to the Regional Administrator upon request until he releases the owner or operator from the financial assurance requirements for post-closure care under Section 264.145(i).

(i) 40 CFR 264.140 through 264.151 (Subpart H), "Financial Requirements", are incorporated by reference including subsequent amendments and editions, except that 40 CFR 264.143(a)(3), (a)(4), (a)(5), (a)(6), 40 CFR 264.145(a)(3), (a)(4), (a)(5), and 40 CFR 264.151(a)(1), Section 15 are not incorporated by reference.

(1) The following shall be substituted for the provisions of 40 CFR 264.143(a)(3) which were not incorporated by reference:

The owner or operator shall deposit the full amount of the closure cost estimate at the time the fund is established. Within 1 year of the effective date of these Rules, an owner or operator using a closure trust fund established prior to the effective date of these Rules shall deposit an amount into the fund so that its value after this deposit at least equals the amount of the current closure cost estimate, or shall obtain other financial assurance as specified in this Section.

(2) The following shall be substituted for the provisions of 40 CFR 264.143(a)(6) which were not incorporated by reference:

After the trust fund is established, whenever the current closure cost estimate changes, the owner or operator shall compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator within 60 days after the change in the cost estimate, shall either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current closure cost estimate, or obtain other financial assurance as specified in this section to cover the difference.

(3) The following shall be substituted for the provisions of 40 CFR 264.145(a)(3) which were not incorporated by reference:

(A) Except as otherwise provided in Paragraph (i)(3)(B) of this Section, the owner or operator shall deposit the full amount of the post-closure cost estimate at the time the fund is established.

(B) If the Department finds that the owner or operator of an inactive hazardous waste disposal unit cannot provide financial assurance for post-closure through any other option (e.g. surety bond, letter of credit, or corporate guarantee), a plan for annual payments to the trust fund over the term of the RCRA post-closure permit may be established by the Department as a permit condition.

(4) The following additional requirement shall apply:

The trustee shall notify the Department of payment to the trust fund, by certified mail within ten days following said payment to the trust fund. The notice shall contain the name of the grantor, the date of payment, the amount of payment, and the current value of the trust fund.

SUBPART H - FINANCIAL REQUIREMENTS

264.140 Applicability.

(a) The requirements of Sections 264.142, 264.143, and 264.147-264.151 apply to owners and operators of all hazardous waste facilities, except as provided otherwise in this section or in Section 264.1.

(b) The requirements of Sections 264.144 and 264.145 apply only to owners and operators of:
  (1) Disposal facilities;
  (2) Piles, and surface impoundments from which the owner or operator intends to remove the wastes at closure, to the extent that these sections are made applicable to such facilities in Sections 264.228 and 264.258;
  (3) Tank systems that are required under 264.197 to meet the requirements for landfills; and
  (4) Containment buildings that are required under Section 264.1102 to meet the requirements for landfills.

(c) States and the Federal government are exempt from the requirements of this subpart.

264.141 Definitions of terms as used in this subpart.

(a) *Closure plan* means the plan for closure prepared in accordance with the requirements of Section 264.112.

(b) *Current closure cost estimate* means the most recent of the estimates prepared in accordance with Section 264.142 (a), (b), and (c).

(c) *Current post-closure cost estimate* means the most recent of the estimates prepared in accordance with Section 264.144(a), (b), and (c).

(d) *Parent corporation* means a corporation which directly owns at least 50 percent of the voting stock of the corporation which is the facility owner or operator; the latter corporation is deemed a "subsidiary" of the parent corporation.

(e) *Post-closure plan* means the plan for post-closure care prepared in accordance with the requirements of Sections 264.117-264.120.

(f) The following terms are used in the specifications for the financial tests for closure, post-closure care, and liability coverage. The definitions are intended to assist in the understanding of these regulations and are not intended to limit the meanings of terms in a way that conflicts with generally accepted accounting practices.
Assets means all existing and all probable-future economic benefits obtained or controlled by a particular entity.
Current assets means cash or other assets or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business.
Current liabilities means obligations whose liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets or the creation of other current liabilities.
Current plugging and abandonment cost estimate means the most recent of the estimates prepared in accordance with Section 144.62(a),(b), and (c) of this title.
Independently audited refers to an audit performed by an independent certified public accountant in accordance with generally accepted auditing standards.
Liabilities means probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services to other entities in the future as a result of past transactions or events.
Net working capital means current assets minus current liabilities.
Net worth means total assets minus total liabilities and is equivalent to owner's equity.
Tangible net worth means the tangible assets that remain after deducting liabilities; such assets would not include intangibles such as goodwill and rights to patents or royalties.

(g) In the liability insurance requirements the terms "*bodily injury*" and "*property damage*" shall have the meanings given these terms by applicable State law. However, these terms do not include those liabilities which, consistent with standard industry practices, are excluded from coverage in liability policies for bodily injury and property damage. The Agency intends the meanings of other terms used in the liability insurance requirements to be consistent with their common meanings within the insurance industry. The definitions given below of several of the terms are intended to assist in the understanding of these regulations and are not intended to limit their meanings in a way that conflicts with general insurance industry usage.
Accidental occurrence means an accident, including continuous or repeated exposure to conditions, which results in bodily injury or property damage neither expected nor intended from the standpoint of the insured.
Legal defense costs means any expenses that an insurer incurs in defending against claims of third parties brought under the terms and conditions of an insurance policy.
Nonsudden accidental occurrence means an occurrence which takes place over time and involves continuous or repeated exposure.

Sudden accidental occurrence means an occurrence which is not continuous or repeated in nature.

(h) *Substantial business relationship* means the extent of a business relationship necessary under applicable State law to make a guarantee contract issued incident to that relationship valid and enforceable. A "substantial business relationship" must arise from a pattern of recent or ongoing business transactions, in addition to the guarantee itself, such that a currently existing business relationship between the guarantor and the owner or operator is demonstrated to the satisfaction of the applicable EPA Regional Administrator.

264.142 Cost estimate for closure.

(a) The owner or operator must have a detailed written estimate, in current dollars, of the cost of closing the facility in accordance with the requirements in Sections 264.111 through 264.115 and applicable closure requirements in Sections 264.178, 264.197, 264.228, 264.258, 264.280, 264.310, and 264.351, and 264.601 through 264.603, and 264.1102.
  (1) the estimate must equal the cost of final closure at the point in the facility's active life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan (see Section 264.112(b)); and
  (2) The closure cost estimate must be based on the costs to the owner or operator of hiring a third party to close the facility. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. (See definition of parent corporation Section 264.141(d).) The owner or operator may use costs for on-site disposal if he can demonstrate that on-site disposal capacity will exist at all times over the life of the facility.
  (3) The closure cost estimate may not incorporate any salvage value that may be realized with the sale of hazardous wastes, or non-hazardous wastes if applicable under Section 264.113(d), facility structures or equipment, land, or other assets associates with the facility at the time of partial or final closure.
  (4) The owner or operator may not incorporate zero cost for hazardous wastes, or non-hazardous wastes if applicable under Section 264.113(d), that might have economic value.

(b) During the active life of the facility, the owner or operator must adjust the closure cost estimate for inflation with 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with Section 264.143. For owners and operators using the financial test or corporate guarantee, the closure cost estimate must be updated for inflation within 30 days after the close of the firm's fiscal year and before submission of updated information to the Regional Administrator as specified in Section 264.143(f)(3). The adjustment may be made by recalculating the maximum costs of closure in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U. S. Department of Commerce in its Survey of Current Business, as specified in paragraphs (b)(1) and (2) of this section. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.
  (1) The first adjustment is made by multiplying the closure cost estimate by the inflation factor. The result is the adjusted closure cost estimate.
  (2) Subsequent adjustments are made by multiplying the latest adjusted closure cost estimate by the latest inflation factor.

(c) During the active life of the facility, the owner or operator must revise the closure cost estimate no later than 30 days after the Regional Administrator has approved the request to modify the closure plan, if the change in the closure plan increases the cost of closure. The revised closure cost estimate must be adjusted for inflation as specified in Section 264.142(b).

(d) The owner or operator must keep the following at the facility during the operating life of the facility: The latest closure cost estimate prepared in accordance with Sections 264.142(a) and (c) and, when this estimate has been adjusted in accordance with Section 264.142(b), the latest adjusted closure cost estimate.

264.143 Financial assurance for closure.

An owner or operator of each facility must establish financial assurance for closure of the facility. He must choose from the options as specified in paragraphs (a) through (f) of this section.

(a) *Closure trust fund.*
  (1) An owner or operator may satisfy the requirements of this section by establishing a closure trust fund which conforms to the requirements of this paragraph and submitting an originally signed duplicate of the trust agreement to the Regional Administrator. An owner or operator of a new facility must submit the originally signed duplicate of the trust agreement to the Regional Administrator at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The trustee must be an

entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(2) The wording of the trust agreement must be identical to the wording specified in Section 264.151(a)(1), and the trust agreement must be accompanied by a formal certification of acknowledgment (for example, see Section 264.151(a)(2)). Schedule A of the trust agreement must be updated within 60 days after a change in the amount of the current closure cost estimate covered by the agreement.

(3) This Federal provision was not adopted by reference, see Paragraph (i)(1).

(4) Deleted.

(5) Deleted.

(6) This Federal provision was not adopted by reference, see Paragraph (i)(2).

(7) If the value of the trust fund is greater than the total amount of the current closure cost estimate, the owner or operator may submit a written request to the Regional Administrator for release of the amount in excess of the current closure cost estimate.

(8) If an owner or operator substitutes other financial assurance as specified in this section for all or part of the trust fund, he may submit a written request to the Regional Administrator for release of the amount in excess of the current closure cost estimate covered by the trust fund.

(9) Within 60 days after receiving a request from the owner or operator for release of funds as specified in paragraphs (a)(7) or (8) of this section, the Regional Administrator will instruct the trustee to release to the owner or operator such funds as the Regional Administrator specified in writing.

(10) After beginning partial or final closure, an owner or operator or another person authorized to conduct partial or final closure may request reimbursements for partial or final closure expenditures by submitting itemized bills to the Regional Administrator. The owner or operator may request reimbursements for partial closure only if sufficient funds are remaining in the trust fund to cover the maximum costs of closing the facility over its remaining operating life. Within 60 days after receiving bills for partial or final closure activities, the Regional Administrator will instruct the trustee to make reimbursements in those amounts as the Regional Administrator specifies in writing, if the Regional Administrator determines that the partial or final closure expenditures are in accordance with the approved closure plan or otherwise justified. If the Regional Administrator has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the value of the trust fund, he may withhold reimbursements of such amounts as he deems prudent until he determines, in accordance with Section 264.143(i) that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the Regional Administrator does not instruct the trustee to make such reimbursements, he will provide the owner or operator with a detailed written statement of reasons.

(11) The Regional Administrator will agree to termination of the trust when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 264.143(i).

(b) *Surety bond guaranteeing payment into a closure trust fund.*

(1) An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this paragraph and submitting the bond to the Regional Administrator. An owner or operator of a new facility must submit the bond to the Regional Administrator at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond must be identical to the wording specified in Section 264.151(b).

(3) The owner or operator who uses a surety bond to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the Regional Administrator. This standby trust fund must meet the requirements specified in Section 264.143(a), except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the Regional Administrator with the surety bond; and

(ii) Until the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in Section 264.143(a);

(B) Updating of Schedule A of the trust agreement (see Section 264.151(a) to show current closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The bond must guarantee that the owner or operator will:
  (i) Fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility; or
  (ii) Fund the standby trust fund in an amount equal to the penal sum within 15 days after an administrative order to begin final closure issued by the Regional Administrator becomes final, or within 15 days after an order to begin final closure is issued by a U. S. district court or other court of competent jurisdiction; or
  (iii) Provide alternate financial assurance as specified in this section, and obtain the Regional Administrator's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and the Regional Administrator of a notice of cancellation of the bond from the surety.

(5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

(6) The penal sum of the bond must be in an amount at least equal to the current closure cost estimate, except as provided in Section 264.143(g).

(7) Whenever the current closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Regional Administrator, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the Regional Administrator.

(8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Regional Administrator. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Regional Administrator, as evidence by the return receipts.

(9) The owner or operator may cancel the bond if the Regional Administrator has given prior written consent based on his receipt of evidence of alternate financial assurance as specified in this section.

(c) *Surety bond guaranteeing performance of closure.*

(1) An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this paragraph and submitting the bond to the Regional Administrator. An owner or operator of a new facility must submit the bond to the Regional Administrator at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond must be identical to the wording specified in Section 264.151(c).

(3) The owner or operator who uses a surety bond to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the Regional Administrator. This standby trust must meet the requirements specified in Section 264.143(a), except that:
  (i) An originally signed duplicate of the trust agreement must be submitted to the Regional Administrator with the surety bond; and
  (ii) Unless the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:
    (A) Payments into the trust fund as specified in Section 264.143(a);
    (B) Updating of Schedule A of the trust agreement (see Section 264.151(a)) to show current closure cost estimates;
    (C) Annual valuations as required by the trust agreement; and
    (D) Notices of nonpayment as required by the trust agreement.

(4) The bond must guarantee that the owner or operator will:
  (i) Perform final closure in accordance with the closure plan and other requirements of the permit for the facility whenever required to do so; or
  (ii) Provide alternate financial assurance as specified in this section, and obtain the Regional Administrator's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and the Regional Administrator of a notice of cancellation of the bond form the surety.

(5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Following a final administrative determination pursuant to Section 3008 of RCRA that the owner or operator has failed to perform final closure in accordance with the closure plan and other permit requirements when required to do so, under the terms of

the bond the surety will perform final closure as guaranteed by the bond or will deposit the amount of the penal sum into the standby trust fund.

(6) The penal sum of the bond must be in an amount at least equal to the current closure cost estimate.

(7) Whenever the current closure cost estimate increases to an amount greater then the penal sum, the owner or operator, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Regional Administrator, or obtain other financial assurance as specified in this section. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the Regional Administrator.

(8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Regional Administrator. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Regional Administrator, as evidenced by the return receipts.

(9) The owner or operator may cancel the bond if the Regional Administrator has given prior written consent. The Regional Administrator will provide such written consent when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 264.143(i).

(10) The surety will not be liable for deficiencies in the performance of closure by the owner or operator after the Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 264.143(i).

(d) *Closure letter of credit.*

(1) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit which conforms to the requirements of this paragraph and submitting the letter to the Regional Administrator. An owner or operator of a new facility must submit the letter of credit to the Regional Administrator at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The letter of credit must be effective before this initial receipt of hazardous waste. The issuing institution must be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a Federal or State agency.

(2) The wording of the letter of credit must be identical to the wording specified in Section 264.151(d).

(3) An owner or operator who uses a letter of credit to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Regional Administrator will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Regional Administrator. This standby trust fund must meet the requirements of the trust fund specified in Section 264.143(a), except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the Regional Administrator with the letter of credit; and

(ii) Unless the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in Section 264.143(a);

(B) Updating of Schedule A of the trust agreement (see Section 264.151(a) to show current closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The letter of credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: the EPA Identification Number, name, and address of the facility, and the amount of funds assured for closure of the facility by the letter of credit.

(5) The letter of credit must be irrevocable and issued for a period of at least 1 year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least 1 year unless, at least 120 days before the current expiration date, the issuing institution notifies both the owner or operator and the Regional Administrator by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days will begin on the date when both the owner or operator and the Region Administrator have received the notice, as evidenced by the return receipts.

(6) The letter of credit must be issued in an amount at least equal to the current closure cost estimate, except as provided in Section 264.143(g).

(7) Whenever the current closure cost estimate increases to an amount greater than the amount of the credit, the owner or operator, within 60 days after the increase, must either cause the amount of the credit to be increased so that it at least equals the current closure cost estimate and submit evidence of such increase to the Regional Administrator, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure cost estimate decreases, the amount of the credit may be reduced

to the amount of the current closure cost estimate following written approval by the Regional Administrator.

(8) Following a final administrative determination pursuant to Section 3008 of RCRA that the owner or operator has failed to perform final closure in accordance with the closure plan and other permit requirements when required to do so, the Regional Administrator may draw on the letter of credit.

(9) If the owner or operator does not establish alternate financial assurance as specified in this section and obtain written approval of such alternate assurance from the Regional Administrator within 90 days after receipt by both the owner or operator and the Regional Administrator of a notice from issuing institution that it has decided not to extent the letter of credit beyond the current expiration date, the Regional Administrator will draw on the letter of credit. The Regional Administrator may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last 30 days of any such extension the Regional Administrator will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this section and obtain written approval of such assurance from the Regional Administrator.

(10) The Regional Administrator will return the letter of credit to the issuing institution for termination when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 264.143(i).

(e) *Closure insurance.*

(1) An owner or operator may satisfy the requirements of this section by obtaining closure insurance which conforms to the requirements of this paragraph and submitting a certificate of such insurance to the Regional Administrator. An owner or operator of a new facility must submit the certificate of insurance to the Regional Administrator at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance must be effective before this initial receipt of hazardous waste. At a minimum, the insurer must be licensed to transact, the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(2) The wording of the certificate of insurance must be identical to the wording specified in Section 264.151(e).

(3) The closure insurance policy must be issued for a face amount at least equal to the current closure cost estimate, except as provided in Section 264.143(g). The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

(4) The closure insurance policy must guarantee that funds will be available to close the facility whenever final closure occurs. The policy must also guarantee that once final closure begins, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the Regional Administrator, to such party or parties as the Regional Administrator specifies.

(5) After beginning partial or final closure, an owner or operator or any other person authorized to conduct closure may request reimbursements for closure expenditures by submitting itemized bills to the Regional Administrator. The owner or operator may request reimbursements for partial closure only if the remaining value of the policy is sufficient to cover the maximum costs of closing the facility over its remaining operating life. Within 60 days after receiving bills for closure activities, the Regional Administrator will instruct the insurer to make reimbursements in such amounts as the Regional Administrator specifies in writing, if the Regional Administrator determines that the partial or final closure expenditures are in accordance with the approved closure plan or otherwise justified. If the Regional Administrator has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the face amount of the policy, he may withhold reimbursements of such amounts as he deems prudent until he determines, in accordance with Section 264.143(i), that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the Regional Administrator does not instruct the insurer to make such reimbursements, he will provide the owner or operator with a detailed written statement of reasons.

(6) The owner or operator must maintain the policy in full force and effect until the Regional Administrator consents to termination of the policy by the owner or operator as specified in paragraph (e)(10) of this section. Failure to pay the premium without substitution of alternate financial assurance as specified in this section, will constitute a significant violation of these regulations, warranting such remedy as the Regional Administrator deems necessary. Such violation will be deemed to begin upon receipt by the Regional Administrator of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.

(7) Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.

(8) The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the Regional Administrator. Cancellation, termination, or failure to renew may not occur, however, during the 120 days beginning with the date of receipt of the notice by both the Regional Administrator and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:

(i) The Regional Administrator deems the facility abandoned; or

(ii) The permit is terminated or revoked or a new permit is denied; or

(iii) Closure is ordered by the Regional Administrator or a U.S. district court or other court of competent jurisdiction; or

(iv) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy). U.S. Code; or

(v) The premium due is paid.

(9) Whenever the current closure cost estimate increases to an amount greater than the face amount of the policy, the owner or operator, within 60 days after the increase, must either cause the face amount to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Regional Administrator, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure cost estimate decreases, the face amount may be reduced to the amount of the current closure cost estimate following written approval by the Regional Administrator.

(10) The Regional Administrator will give written consent to the owner or operator that he may terminate the insurance policy when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 264.143(i).

(f) *Financial test and corporate guarantee for closure.*

(1) An owner or operator may satisfy the requirements of this section by demonstrating that he passes a financial test as specified in this paragraph. To pass this test the owner or operator must meet the criteria of either paragraph (f)(1)(i) or (ii) of this section:

(i) The owner or operator must have:

(A) Two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

(B) Net working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least $10 million; and

(D) Assets in the United States amounting to at least 90 percent of total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(ii) The owner or operator must have:

(A) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and

(B) Tangible net worth at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least $10 million; and

(D) Assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(2) The phrase "*current closure and post-closure cost estimates*" as used in paragraph (f)(1) of this section refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (Section 164.151(f)). The phrase "*current plugging and abandonment cost estimates*" as used in paragraph (f)(1) of this section refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (Section 144.70(f) of this title).

(3) To demonstrate that he meets this test, the owner or operator must submit the following items to the Regional Administrator:

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in Section 264.151(f); and

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

(iii) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(A) He has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

(B) In connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

(4) An owner or operator of a new facility must submit the items specified in paragraph (f)(3) of this section to the Regional Administrator at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal.

(5) After the initial submission of items specified in paragraph (f)(3) of this section, the owner or operator must send updated information to the Regional Administrator within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in paragraph (f)(3) of this section.

(6) If the owner or operator no longer meets the requirements of paragraph (f)(1) of this section, he must send notice to the Regional Administrator of intent to establish alternate financial assurance as specified in this section. The notice must be sent by certified mail within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator must provide the alternate financial assurance within 120 days after the end of such fiscal year.

(7) The Regional Administrator may, based on a reasonable belief that the owner or operator may no longer meet the requirements of paragraph (f)(1) of this section, require reports of financial condition at any time from the owner or operator in addition to those specified in paragraph (f)(3) of this section. If the Regional Administrator finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of paragraph (f)(1) of this section, the owner or operator must provide alternate financial assurance as specified in this section within 30 days after notification of such a finding.

(8) The Regional Administrator may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see paragraph (f)(3)(ii) of this section). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The Regional Administrator will evaluate other qualifications on an individual basis. The owner or operator must provide alternate financial assurance as specified in this section within 30 days after notification of the disallowance.

(9) The owner or operator is no longer required to submit the items specified in paragraph (f)(3) of this section when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 264.143(i).

(10) An owner or operator may meet the requirements of this section by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in paragraphs (f)(1) through (f)(8) of this section and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in Section 264.151(h). The certified copy of the guarantee must accompany the items sent to the Regional Administrator as specified in paragraph (f)(3) of this section. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee must provide that:

(i) If the owner or operator fails to perform final closure of a facility covered by the corporate guarantee in accordance with the closure plan and other permit requirements whenever required to do so, the guarantor will do so or establish a trust fund as specified in Section 264.143(a) in the name of the owner or operator.

(ii) The corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the Regional Administrator. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Regional Administrator as evidenced by the return receipts.

(iii) If the owner or operator fails to provide alternate financial assurance as specified in this section and obtain the written approval of such alternate assurance from the Regional Administrator within 90 days after receipt by both the owner or operator and the Regional Administrator of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternative financial assurance in the name of the owner or operator.

(g) *Use of multiple financial mechanisms.* An owner or operator may satisfy the requirements of this section by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. The mechanisms must be as specified in paragraphs (a), (b), (d), and (e), respectively, of this section, except that it is the combination of mechanisms rather than the single mechanism, which must provide financial assurance for an amount at least equal to the current closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit he may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The Regional Administrator may use any or all of the mechanisms to provide for closure of the facility.

(h) *Use of a financial mechanism for multiple facilities.* An owner or operator may use a financial assurance mechanism specified in this section to meet the requirements of this section for more than one facility. Evidence of financial assurance submitted to the Regional Administrator must include a list showing for each facility, the EPA Identification Number, name, address, and the amount of funds for closure assured by the mechanism. If the facilities covered by the mechanism are in more than one Region, identical evidence of financial assurance must be submitted to and maintained with the Regional Administrators of all such Regions. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for closure of any of the facilities covered by the mechanism, the Regional Administrator may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

(i) *Release of the owner or operator from the requirements of this section.* Within 60 days after receiving certifications from the owner or operator and an independent registered professional engineer that final closure has been completed in accordance with the approved closure plan, the Regional Administrator will notify the owner or operator in writing that he is no longer required by this Section to maintain financial assurance for final closure of the facility, unless the Regional Administrator has reason to believe that final closure has not been in accordance with the approved closure plan. The Regional Administrator shall provide the owner or operator a detailed written statement of any such reason to believe that closure has not been in accordance with the approved closure plan.

264.144 Cost estimate for post-closure care.

(a) The owner or operator of a disposal surface impoundment, disposal miscellaneous unit, land treatment unit, or landfill unit, or of a surface impoundment or waste pile required under Sections 264.228 and 264.258 to prepare a contingent closure and post-closure plan, must have a detailed written estimate, in current dollars, of the annual cost of post-closure monitoring and maintenance of the facility in accordance with the applicable post-closure regulations in Sections 264.117 through 264.120, 264.228, 264.258, 264.280, and 264.310 and 264.603.

(1) The post-closure cost estimate must be based on the costs to the owner or operator of hiring a third party to conduct post-closure care activities. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. (See definition of parent corporation in Section 264.141(d).)

(2) The post-closure cost estimate is calculated by multiplying the annual post-closure cost estimate by the number of years of post-closure care required under Section 264.117.

(b) During the active life of the facility, the owner or operator must adjust the post-closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with Section 264.145. For owners or operators using the financial test or corporate guarantee, the post-closure cost estimate must be updated for inflation within 30 days after the close of the firm's fiscal year and before the submission of updated information to the Regional Administrator as specified in Section 264.145(f)(5). The adjustment may be made by recalculating the post-closure cost estimate in current dollars or by using an inflation factor derived from the most recent "Implicit Price Deflator for Gross National Product" published by the U. S. Department of Commerce in its *Survey of Current Business* as specified in Section 264.145(b)(1) and (2). The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.

(1) The first adjustment is made by multiplying the post-closure cost estimate by the inflation factor. The result is the adjusted post-closure cost estimate.

(2) Subsequent adjustments are made by multiplying the latest adjusted post-closure cost estimate by the latest inflation factor.

(c) During the active life of the facility, the owner or operator must revise the post-closure cost estimate within 30 days after the Regional Administrator has approved the request to modify the post-closure plan, if the change in the post-closure plan increases the cost of post-closure care. The revised post-closure cost estimate must be adjusted for inflation as specified in Section 264.144(b).

(d) The owner or operator must keep the following at the facility during the operating life of the facility: The latest post-closure cost estimate prepared in accordance with Sections 264.144(a) and (c) and, when this estimate has been adjusted in accordance with Section 264.144(b), the latest adjusted post-closure cost estimate.

264.145 Financial assurance for post-closure care.

The owner or operator of a hazardous waste management unit subject to the requirements of Section 264.144 must establish financial assurance for post-closure care in accordance with the approved post-closure plan for the facility 60 days prior to the initial receipt of hazardous waste or the effective date of the regulation, whichever is later. He must choose from the following options:

(a) *Post-closure trust fund.*

(1) An owner or operator may satisfy the requirements of this section by establishing a post-closure trust fund which conforms to the requirements of this paragraph and submitting an originally signed duplicate of the trust agreement to the Regional Administrator. An owner or operator of a new facility must submit the originally signed duplicate of the trust agreement to the Regional Administrator at least 60 days before the date on which hazardous waste is first received for disposal. The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(2) The wording of the trust agreement must be identical to the wording specified in Section 264.151(a)(1), and the trust agreement must be accompanied by a formal certification of acknowledgement (for example, see Section 264.151(a)(2)). Schedule A of the trust agreement must be updated within 60 days after a change in the amount of the current post-closure cost estimate covered by the agreement.

(3) **This Federal provision was not adopted by reference; see Paragraph (i)(3) for State requirements.**

(4) **Deleted.**

(5) **Deleted.**

(6) After the pay-in period is completed, whenever the current post-closure cost estimate changes during the operating life of the facility, the owner or operator must compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within 60 days after the change in the cost estimate, must either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current post-closure cost estimate, or obtain other financial assurance as specified in this section to cover the difference.

(7) During the operating life of the facility, if the value of the trust fund is greater than the total amount of the current post-closure cost estimate, the owner or operator may submit a written request to the Regional Administrator for release of the amount in excess of the current post-closure cost estimate.

(8) If an owner or operator substitutes other financial assurance as specified in this section for all or part of the trust fund, he may submit a written request to the Regional Administrator for release of the amount in excess of the current post-closure cost estimate covered by the trust fund.

(9) Within 60 days after receiving a request from the owner or operator for release of funds as specified in paragraphs (a)(7) or (8) of this section, the Regional Administrator will instruct the trustee to release to the owner or operator such funds as the Regional Administrator specifies in writing.

(10) During the period of post-closure care, the Regional Administrator may approve a release of funds if the owner or operator demonstrates to the Regional Administrator that the value of the trust fund exceeds the remaining cost of post-closure care.

(11) An owner or operator or any other person authorized to conduct post-closure care may request reimbursements for post-closure care expenditures by submitting itemized bills to the Regional Administrator. Within 60 days after receiving bills for post-closure care activities, the Regional Administrator will instruct the trustee to make reimbursements in those amounts as the Regional Administrator specifies in writing, if the Regional Administrator determines that the post-closure care expenditures are in accordance with with the approved post-closure plan or otherwise justified. If the Regional Administrator does not instruct the trustee to make such reimbursements, he will provide the owner or operator with a detailed written statement of reasons.

(12) The Regional Administrator will agree to termination of the trust when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 264.145(i).

(b) *Surety bond guaranteeing payment into a post-closure trust fund.*

(1) An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this paragraph and submitting the bond to the Regional Administrator. An owner or operator of a new facility must submit the bond to the Regional Administrator at least 60 days before the date on which hazardous waste is first received for disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond must be identical to the wording specified in Section 264.151(b).

(3) The owner or operator who uses a surety bond to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the Regional Administrator. This standby trust fund must meet the requirements specified in Section 264.145(a), except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the Regional Administrator with the surety bond; and

(ii) Until the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in Section 264.145(a);

(B) Updating of Schedule A of the trust agreement (see Section 264.151(a)) to show current post-closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The bond must guarantee that the owner or operator will:

(i) Fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility; or

(ii) Fund the standby trust fund in an amount equal to the penal sum within 15 days after an administrative order to begin final closure issued by the Regional Administrator becomes final, or within 15 days after an order to begin final closure is issued by a U.S. District Court or other court of competent jurisdiction; or

(iii) Provide alternate financial assurance as specified in this section, and obtain the Regional Administrator's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and the Regional Administrator of a notice of cancellation of the bond from the surety.

(5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

(6) The penal sum of the bond must be in an amount at least equal to the current post-closure cost estimate, accept as provided in Section 264.145(g).

(7) Whenever the current post-closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Regional Administrator, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current post-closure cost estimate decreases, the penal sum may be reduced to the amount of the current post-closure cost estimate following written approval by the Regional Administrator.

(8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Regional Administrator. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Regional Administrator, as evidenced by the return receipts.

(9) The owner or operator may cancel the bond if the Regional Administrator has given prior written consent based on his receipt of evidence of alternate financial assurance as specified in this section.

(c) *Surety bond guaranteeing performance of post-closure care.*

(1) An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this paragraph and submitting the bond to the Regional Administrator. An owner or operator of a new facility must submit the bond to the Regional Administrator at least 60 days before the date on which hazardous waste is first received for disposal. The bond must be effective before this initial receipt of hazardous waste. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond must be identical to the wording specified in Section 264.151(c).

(3) The owner or operator who uses a surety bond to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be

deposited by the surety directly into the standby trust fund in accordance with instructions from the Regional Administrator. This standby trust fund must meet the requirements specified in Section 264.145(a), except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the Regional Administrator with the surety bond; and

(ii) Unless the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in Section 264.145(a);

(B) Updating of Schedule A of the trust agreement (see Section 264.151(a)) to show current post-closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The bond must guarantee that the owner or operator will:

(i) Perform post-closure care in accordance with the post-closure plan and other requirements of the permit for the facility; or

(ii) Provide alternate financial assurance as specified in this section, and obtain the Regional Administrator's written approval of the assurance provided, within 90 days of receipt by both the owner or operator and the Regional Administrator of a notice of cancellation of the bond from the surety.

(5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. Following a final administrative determination pursuant to Section 3008 of RCRA that the owner or operator has failed to perform post-closure care in accordance with the approved post-closure plan and other permit requirements under the terms of the bond, the surety will perform post-closure care in accordance with the post-closure plan and other permit requirements or will deposit the amount of the penal sum into the standby trust fund.

(6) The penal sum of the bond must be in an amount at least equal to the current post-closure cost estimate.

(7) Whenever the current post-closure cost estimate increases to an amount greater than the penal sum during the operating life of the facility, the owner or operator, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Regional Administrator, or obtain other financial assurance as specified in this section. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the penal sum may be reduced to the amount of the current post-closure cost estimate following written approval by the Regional Administrator.

(8) During the period of post-closure care, the Regional Administrator may approve a decrease in the penal sum if the owner or operator demonstrates to the Regional Administrator that the amount exceeds the remaining cost of post-closure care.

(9) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Regional Administrator. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Regional Administrator, as evidenced by the return receipts.

(10) The owner or operator may cancel the bond if the Regional Administrator has given prior written consent. The Regional Administrator will provide such written consent when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 264.145(i).

(11) The surety will not be liable for deficiencies in the performance of post-closure care by the owner or operator after the Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 264.145(i).

(d) *Post-closure letter of credit.*

(1) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit which conforms to the requirements of this paragraph and submitting the letter to the Regional Administrator. An owner or operator of a new facility must submit the letter of credit to the Regional Administrator at least 60 days before the date on which hazardous waste is first received for disposal. The letter of credit must be effective before this initial receipt of hazardous waste. The issuing institution must be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a Federal or State agency.

(2) The wording of the letter of credit must be identical to the wording specified in Section 264.151(d).

(3) An owner or operator who uses a letter of credit to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Regional Administrator will be deposited by the issuing institution directly into the standby trust

fund in accordance with instructions from the Regional Administrator. This standby trust fund must meet the requirements of the trust fund specified in Section 264.145(a), except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the Regional Administrator with the letter of credit; and

(ii) Unless the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in Section 264.145(a);

(B) Updating of Schedule A of the trust agreement (see Section 264.151(a)) to show current post-closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The letter of credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: the EPA Identification Number, name, and address of the facility, and the amount of funds assured for post-closure care of the facility by the letter of credit.

(5) The letter of credit must be irrevocable and issued for a period of at least 1 year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least 1 year unless, at least 120 days before the current expiration date, the issuing institution notifies both the owner or operator and the Regional Administrator by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days will begin on the date when both the owner or operator and the Regional Administrator have received the notice, as evidenced by the return receipts.

(6) The letter of credit must be issued in an amount of least equal to the current post-closure cost estimate, except as provided in Section 264.145(g).

(7) Whenever the current post-closure cost estimate increases to an amount greater than the amount of the credit during the operating life of the facility, the owner or operator, within 60 days after the increase, must either cause the amount of the credit to be increased so that it at least equals the current post-closure cost estimate and submit evidence of such increase to the Regional Administrator, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the amount of the credit may be reduced to the amount of the current post-closure cost estimate following written approval by the Regional Administrator.

(8) During the period of post-closure care, the Regional Administrator may approve a decrease in the amount of the letter of credit if the owner or operator demonstrates to the Regional Administrator that the amount exceeds the remaining cost of post-closure care.

(9) Following a final administrative determination pursuant to Section 3008 of RCRA that the owner or operator has failed to perform post-closure care in accordance with the approved post-closure plan and other permit requirements, the Regional Administrator may draw on the letter of credit.

(10) If the owner or operator does not establish alternate financial assurance as specified in this section and obtain written approval of such alternate assurance from the Regional Administrator within 90 days after receipt by both the owner or operator and the Regional Administrator of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the Regional Administrator will draw on the letter of credit. The Regional Administrator may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last 30 days of any such extension the Regional Administrator will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this section and obtain written approval of such assurance from the Regional Administrator.

(11) The Regional Administrator will return the letter of credit to the issuing institution for termination when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 264.145(i).

(e) *Post-closure insurance.*

(1) An owner or operator may satisfy the requirements of this section by obtaining post-closure insurance which conforms to the requirements of this paragraph and submitting a certificate of such insurance to the Regional Administrator. An owner or operator of a new facility must submit the certificate of insurance to the Regional Administrator at least 60 days before the date on which hazardous waste is first received for disposal. The insurance must be effective before this initial receipt of hazardous waste. At a minimum, the insurer must be licensed to transact the business of insurance, or be eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(2) The wording of the certificate of insurance must be identical to the wording specified in Section 264.151(e).

(3) The post-closure insurance policy must be issued for a face amount at least equal to the current post-closure cost estimate, except as provided in Section 264.145(g). The term "face amount" means the total

amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

(4) The post-closure insurance policy must guarantee that funds will be available to provide post-closure care of the facility whenever the post-closure period begins. The policy must also guarantee that once post-closure care begins, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the Regional Administrator, to such party or parties as the Regional Administrator specifies.

(5) An owner or operator or any other person authorized to conduct post-closure care may request reimbursements for post-closure care expenditures by submitting itemized bills to the Regional Administrator. Within 60 days after receiving bills for post-closure care activities, the Regional Administrator will instruct the insurer to make reimbursements in those amounts as the Regional Administrator specifies in writing, if the Regional Administrator determines that the post-closure care expenditures are in accordance with the approved post-closure plan or otherwise justified. If the Regional Administrator does not instruct the insurer to make such reimbursements, he will provide the owner or operator with a detailed written statement of reasons.

(6) The owner or operator must maintain the policy in full force and effect until the Regional Administrator consents to termination of the policy by the owner or operator as specified in paragraph (e)(11) of this section. Failure to pay the premium without substitution of alternate financial assurance as specified in this section will constitute a significant violation of these regulations, warranting such remedy as the Regional Administrator deems necessary. Such violation will be deemed to begin upon receipt by the Regional Administrator of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.

(7) Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.

(8) The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the Regional Administrator. Cancellation, termination, or failure to renew may not occur, however, during the 120 days beginning with the date of receipt of the notice by both the Regional Administrator and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:

  (i) The Regional Administrator deems the facility abandoned; or

  (ii) The permit is terminate or revoked or a new permit is denied; or

  (iii) Closure is ordered by the Regional Administrator or a U.S. district court or other court of competent jurisdiction; or

  (iv) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

  (v) The premium due is paid.

(9) Whenever the current post-closure cost estimate increases to an amount greater than the face amount of the policy during the operating life of the facility, the owner or operator, within 60 days after the increase, must either cause the face amount to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Regional Administrator, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the face amount may be reduced to the amount of the current post-closure cost estimate following written approval by the Regional Administrator.

(10) Commencing on the date that liability to make payments pursuant to the policy accrues, the insurer will thereafter annually increase the face amount of the policy. Such increase must be equivalent to the face amount of the policy, less any payments made, multiplied by an amount equivalent to 85 percent of the most recent investment rate or of the equivalent coupon-issue yield announced by the U.S. Treasury for 26-week Treasury securities.

(11) The Regional Administrator will give written consent to the owner or operator that he may terminate the insurance policy when:

  (i) An owner or operator substitutes alternate financial assurance as specified in this section; or

  (ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 264.145(i).

(f) *Financial test and corporate guarantee for post-closure care.*

(1) An owner or operator may satisfy the requirements of this section by demonstrating that he passes a financial test as specified in this paragraph. To pass this test the owner or operator must meet the criteria of either paragraph (f)(1)(i) or (ii) of this section:

(i) The owner or operator must have:

A) Two of the following three ratios: a ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

(B) Net working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least $10 million; and

(D) Assets in the United States amounting to at least 90 percent of his total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(ii) The owner or operator must have:

(A) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A or Baa as issued by Moody's; and

(B) Tangible net worth at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least $10 million; and

(D) Assets located in the United States amounting to at least 90 percent of his total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(2) The phrase "current closure and post-closure cost estimates" as used in paragraph (f)(1) of this section refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (Section 264.151(f)). The phrase "current plugging and abandonment cost estimates" as used in paragraph (f)(1) of this section refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (Section 144.70(f) of this Title).

(3) To demonstrate that he meets this test, the owner or operator must submit the following items to the Regional Administrator:

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in Section 264.151(f); and

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

(iii) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(A) He has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

(B) In connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

(4) An owner or operator of a new facility must submit the items specified in paragraph (f)(3) of this section to the Regional Administrator at least 60 days before the date on which hazardous waste is first received for disposal.

(5) After the initial submission of items specified in paragraph (f)(3) of this section, the owner or operator must send updated information to the Regional Administrator within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in paragraph (f)(3) of this section.

(6) If the owner or operator no longer meets the requirements of paragraph (f)(1) of this section, he must send notice to the Regional Administrator of intent to establish alternate financial assurance as specified in this section. The notice must be sent by certified mail within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator must provide the alternate financial assurance within 120 days after the end of such fiscal year.

(7) The Regional Administrator may, based on a reasonable belief that the owner or operator may no longer meet the requirements of paragraph (f)(1) of this section, require reports of financial condition at any time from the owner or operator in addition to those specified in paragraph (f)(3) of this section. If the Regional Administrator finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of paragraph (f)(1) of this section, the owner or operator must provide alternate financial assurance as specified in this section within 30 days after notification of such a finding.

(8) The Regional Administrator may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see paragraph (f)(3)(ii) of this section). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The Regional Administrator will evaluate other qualifications on an individual basis. The owner or operator must provide alternate financial assurance as specified in this section within 30 days after notification of the disallowance.

(9) During the period of post-closure care, the Regional Administrator may approve a decrease in the current post-closure cost estimate for which this test demonstrates financial assurance if the owner or operator demonstrates to the Regional Administrator that the amount of the cost estimate exceeds the remaining cost of post-closure care.

(10) The owner or operator is no longer required to submit the items specified in paragraph (f)(3) of this section when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 264.145(i).

(11) An owner or operator may meet the requirements for this section by obtaining a written guarantee. The guarantor must be the direct of higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in paragraphs (f)(1) through (9) of this section and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in Section 264.151(h). A certified copy of the guarantee must accompany the items sent to the Regional Administrator as specified in paragraph (f)(3) of this section. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee must provide that:

(i) If the owner or operator fails to perform post-closure care of a facility covered by the corporate guarantee in accordance with the post-closure plan and other permit requirements whenever required to do so, the guarantor will do so or establish a trust fund as specified in Section 264.145(a) in the name of the owner or operator.

(ii) The corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the Regional Administrator. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Regional Administrator, as evidenced by the return receipts.

(iii) If the owner or operator fails to provide alternate financial assurance as specified in this section and obtain the written approval of such alternate assurance from the Regional Administrator within 90 days after receipt by both the owner or operator and the Regional Administrator of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternate financial assurance in the name of the owner or operator.

(g) *Use of multiple financial mechanisms.* An owner or operator may satisfy the requirements of this section by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds guaranteeing payment into a trust fund, letters of credit, and insurance. The mechanisms must be as specified in paragraphs (a), (b), (d), and (e), respectively, of this section, except that it is the combination of mechanisms, rather than the single mechanism, which must provide financial assurance for an amount at least equal to the current post-closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, he may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The Regional Administrator may use any or all of the mechanisms to provide for post-closure care of the facility.

(h) *Use of a financial mechanism for multiple facilities.* An owner or operator may use a financial assurance mechanism specified in this section to meet the requirements of this section for more than one facility. Evidence of financial assurance submitted to the Regional Administrator must include a list showing, for each facility, the EPA Identification Number, name, address, and the amount of funds for post-closure care assured by the mechanism. If the facilities covered by the mechanism are in more than one Region, identical evidence of financial assurance must be submitted to and maintained with the Regional Administrators of all such Regions. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for post-closure care of any of the facilities covered by the mechanism, the Regional Administrator may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

(i) *Release of the owner or operator from the requirements of this section.* Within 60 days after receiving certifications from the owner or operator and an independent registered professional engineer that the post-closure care period has been completed for a hazardous waste disposal unit in accordance with the approved plan, the Regional Administrator will notify the owner or operator that he is no longer required to maintain financial assurance for post-closure care of that unit, unless the Regional Administrator has reason to believe that post-closure care has not been in accordance with the approved post-closure plan. The Regional Administrator shall provide the owner or operator with a detailed written statement of any such reason to believe that post-closure care has not been in accordance with approved post-closure plan.

264.146 Use of a mechanism for financial assurance of both closure and post-closure care.

An owner or operator may satisfy the requirements for financial assurance for both closure and post-closure care for one or more facilities by using a trust fund, surety bond, letter of credit, insurance, financial test, or corporate guarantee that meets the specifications for the mechanism in both Section 264.143 and 264.145. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for financial assurance of closure and of post-closure care.

264.147 Liability requirements.

(a) *Coverage for sudden accidental occurrences.* An owner or operator of a hazardous waste treatment, storage, or disposal facility, or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator must have and maintain liability coverage for sudden accidental occurrences in the amount of at least $1 million per occurrence with an annual aggregate of at least $2 million, exclusive of legal defense costs. This liability coverage may be demonstrated as specified in paragraphs (a)(1), (a)(2), (a)(3), (a)(4), (a)(5), or (a)(6) of this section:

(1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this paragraph.

(i) Each insurance policy must be amended by attachment of the Hazardous Waste Facility Liability Endorsement or evidenced by a Certificate of Liability Insurance. The wording of the endorsement must be identical to the wording specified in Section 264.151(i). The wording of the certificate of insurance must be identical to the wording specified in Section 264.151(j). The owner or operator must submit a signed duplicate original of the endorsement or the certificate of insurance to the Regional Administrator, or Regional Administrators if the facilities are located in more than one Region. If requested by a Regional Administrator, the owner or operator must provide a signed duplicate original of the insurance policy. An owner or operator of a new facility must submit the signed duplicate original of the Hazardous Waste Facility Liability Endorsement or the Certificate of Liability Insurance to the Regional Administrator at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance must be effective before this initial receipt of hazardous waste.

(ii) Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(2) An owner or operator may meet the requirements of this section by passing a financial test or using the guarantee for liability coverage as specified in paragraphs (f) and (g) of this section.

(3) An owner or operator may meet the requirements of this section by obtaining a letter of credit for liability coverage as specified in paragraph (h) of this section.

(4) An owner or operator may meet the requirements of this section by obtaining a surety bond for liability coverage as specified in paragraph (i) of this section.

(5) An owner or operator may meet the requirements of this section by obtaining a trust fund for liability coverage as specified in paragraph (j) of this section.

(6) An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amounts required by this section. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this paragraph, the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.

(7) An owner or operator shall notify the Regional Administrator in writing within 30 days whenever:

(i) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in paragraphs (a)(1) through (a)(6) of this section; or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under paragraphs (a)(1) through (a)(6) of this section; or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or nonsudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under paragraphs (a)(1) through (a)(6) of this section.

(b) *Coverage for nonsudden accidental occurrences.*

An owner or operator of a surface impoundment, landfill, or land treatment facility, or disposal miscellaneous unit that is used to manage hazardous waste, or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by nonsudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator must have and maintain liability coverage for nonsudden accidental occurrences in the amount of at least $3 million per occurrence with an annual aggregate of at least $6 million, exclusive of legal defense costs. An owner or operator who must meet the requirements of this section may combine the required per-occurrence coverage levels for sudden and nonsudden accidental occurrences into a single per-occurrence level, and combine the required annual aggregate coverage levels for sudden and nonsudden accidental occurrences into a single annual aggregate level. Owners or operators who combine coverage levels for sudden and nonsudden accidental occurrences must maintain liability coverage in the amount of at least $4 million per occurrence and $8 million annual aggregate. This liability coverage may be demonstrated as specified in paragraphs (b) (1), (2), (3), (4), (5), or (6), of this section:

(1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this paragraph.

(i) Each insurance policy must be amended by attachment of the Hazardous Waste Facility Liability Endorsement or evidenced by a Certificate of Liability Insurance. The wording of the endorsement must be identical to the wording specified in Section 264.151(i). The wording of the certificate of insurance must be identical to the wording specified in Section 264.151(j). The owner or operator must submit a signed duplicate original of the endorsement or the certificate of insurance to the Regional Administrator, or Regional Administrators if the facilities are located in more than one Region. If requested by a Regional Administrator, the owner or operator must provide a signed duplicate original of the insurance policy. An owner or operator of a new facility must submit the signed duplicate original of the Hazardous Waste Facility Liability Endorsement or the Certificate of Liability Insurance to the Regional Administrator at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal. The insurance must be effective before this initial receipt of hazardous waste.

(ii) Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(2) An owner or operator may meet the requirements of this section by passing a financial test or using the guarantee for liability coverage as specified in paragraphs (f) and (g) of this section.

(3) An owner or operator may meet the requirements of this section by obtaining a letter of credit for liability coverage as specified in paragraph (h) of this section.

(4) An owner or operator may meet the requirements of this section by obtaining a surety bond for liability coverage as specified in paragraph (i) of this section.

(5) An owner or operator may meet the requirements of this section by obtaining a trust fund for liability coverage as specified in paragraph (j) of this section.

(6) An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amount required by this section. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this paragraph, the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.

(7) An owner or operator shall notify the Regional Administrator in writing within 30 days whenever:

(i) A Claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in paragraphs (b)(1) through (b)(6) of this section; or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under paragraphs (b)(1) through (b)(6) of this section; or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under paragraphs (b)(1) through (b)(6) of this section.

(c) *Request for variance.*

If an owner or operator can demonstrate to the satisfaction of the Regional Administrator that the levels of financial responsibility required by paragraph (a) or (b) of this section are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the owner or operator may obtain a variance from the Regional Administrator. The request for a variance must be submitted to the Regional Administrator as part of the application under Section 270.14 of this chapter for a facility that does not have a permit, or pursuant to the procedures for permit modification under Section 124.5 of this chapter for a facility that has a permit. If granted, the variance will take the form of an adjusted level of required liability coverage, such level to be based on the Regional Administrator's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. The Regional Administrator may require an owner or operator who requests a variance to provide such technical and engineering information as is deemed necessary by the Regional Administrator to determine a level of financial responsibility other than that required by paragraph (a) or (b) of this section. Any request for a variance for a permitted facility will be treated as a request for a permit modification under Sections 270.41(a)(5) and 124.5 of this chapter.

(d) *Adjustments by the Regional Administrator.*

If the Regional Administrator determines that the levels of financial responsibility required by paragraph (a) or (b) of this section are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the Regional Administrator may adjust the level of financial responsibility required under paragraph (a) or (b) of this section as may be necessary to protect human health and the environment. This adjusted level will be based on the Regional Administrator's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. In addition, if the Regional Administrator determines that there is a significant risk to human health and the environment from nonsudden accidental occurrences resulting from the operations of a facility that is not a surface impoundment, landfill, or land treatment facility, he may require that an owner or operator of the facility comply with paragraph (b) of this section. An owner or operator must furnish to the Regional Administrator, within a reasonable time, any information which the Regional Administrator requests to determine whether cause exists for such adjustments of level or type of coverage. Any adjustment of the level or type of coverage for a facility that has a permit will be treated as a permit modification under Sections 270.41(a)(5) and 124.5 of this chapter.

(e) *Period of coverage.*

Within 60 days after receiving certifications from the owner or operator and an independent registered professional engineer that final closure has been completed in accordance with the approved closure plan, the Regional Administrator will notify the owner or operator in writing that he is no longer required by this section to maintain liability coverage for that facility, unless the Regional Administrator has reason to believe that closure has not been in accordance with the approved closure plan.

(f) *Financial test for liability coverage.*

(1) An owner or operator may satisfy the requirements of this section by demonstrating that he passes a financial test as specified in this paragraph. To pass this test the owner or operator must meet the criteria of paragraph (f)(1)(i) or (ii):

(i) The owner or operator must have:

(A) Net working capital and tangible net worth each at least six times the amount of liability coverage to be demonstrated by this test; and

(B) Tangible net worth of at least $10 million; and

(C) Assets in the United States amounting to either:

(1) At least 90 percent of his total assets; or

(2) at least six times the amount of liability coverage to be demonstrated by this test.

(ii) The owner or operator must have:

(A) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's, or Aaa, Aa, A, or Baa as issued by Moody's; and

(B) Tangible net worth of at least $10 million; and

(C) Tangible net worth at least six times the amount of liability coverage to be demonstrated by this test; and

(D) Assets in the United States amounting to either:

(1) At least 90 percent of his total assets; or

(2) at least six times the amount of liability coverage to be demonstrated by this test.

(2) The phrase "amount of liability coverage" as used in paragraph (f)(1) of this section refers to the annual aggregate amounts for which coverage is required under paragraphs (a) and (b) of this section.

(3) To demonstrate that he meets this test, the owner or operator must submit the following three items to the Regional Administrator:

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in Section 264.151(g). If an owner or operator is using the financial test to demonstrate both assurance for closure or post-closure care, as specified by Sections 264.143(f), 264.145(f), 265.143(e), and 265.145(e), and liability coverage, he must submit the letter specified in Section 264.151(g) to cover both forms of financial responsibility; a separate letter as specified in Section 264.151(f) is not required.

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year.

(iii) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(A) He has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

(B) In connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

(4) An owner or operator of a new facility must submit the items specified in paragraph (f)(3) of this section to the Regional Administrator at least 60 days before the date on which hazardous waste is first received for treatment, storage, or disposal.

(5) After the initial submission of items specified in paragraph (f)(3) of this section, the owner or operator must send updated information to the Regional Administrator within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in paragraph (f)(3) of this section.

(6) If the owner or operator no longer meets the requirements of paragraph (f)(1) of this section, he must obtain insurance, a letter of credit, a surety bond, a trust fund, or a guarantee for the entire amount of required liability coverage as specified in this section. Evidence of liability coverage must be submitted to the Regional Administrator within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the test requirements.

(7) The Regional Administrator may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see paragraph (f)(3)(ii) of this section). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The Regional Administrator will evaluate other qualifications on an individual basis. The owner or operator must provide evidence of insurance for the entire amount of required liability coverage as specified in this section within 30 days after notification of disallowance.

(g) *Guarantee for liability coverage.*

(1) Subject to paragraph (g)(2) of this section, an owner or operator may meet the requirements of this section by obtaining a written guarantee, hereinafter referred to as "guarantee." The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in paragraphs (f)(1) through (f)(6) of this section. The wording of the guarantee must be identical to the wording specified in Section 264.151(h)(2) of this part. A certified copy of the guarantee must accompany the items sent to the Regional Administrator as specified in paragraph (f)(3) of this section. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, this letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee.

(i) If the owner or operator fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden or nonsudden accidental occurrences (or both as the case may be), arising from the operation of facilities covered by this corporate guarantee, or fails to pay an amount agreed to in settlement of claims arising from or alleged to arise from such injury or damage, the guarantor will do so up to the limits of coverage.

(ii) Reserved

(2) (i) In the case of corporations incorporated in the United States, a guarantee may be used to satisfy the requirements of this section only if the Attorneys General or Insurance Commissioners of (A) the

State in which the guarantor is incorporated, and (B) each State in which a facility covered by the guarantee is located have submitted a written statement to EPA that a guarantee executed as described in this section and Section 264.151(h)(2) is a legally valid and enforceable obligation in that State.

(ii) In the case of corporations incorporated outside the United States, a guarantee may be used to satisfy the requirements of this section only if (A) the non-U.S. corporation has identified a registered agent for service of process in each State in which a facility covered by the guarantee is located and in the State in which it has its principal place of business, and (B) the Attorney General or Insurance Commissioner of each State in which a facility covered by the guarantee is located and the State in which the guarantor corporation has its principal place of business, has submitted a written statement to EPA that a guarantee executed as described in this section and Section 264.151(h)(2) is a legally valid and enforceable obligation in that State.

(h) Letter of credit for liability coverage.

(1) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter or credit that conforms to the requirements of this paragraph and submitting a copy of the letter of credit to the Regional Administrator.

(2) The financial institution issuing the letter of credit must be an entity that has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a Federal or State agency.

(3) The wording of the letter of credit must be identical to the wording specified in Section 264.151(k) of this part.

(4) An owner or operator who uses a letter of credit to satisfy the requirements of this section may also establish a standby trust fund. Under the terms of such a letter of credit, all amounts paid pursuant to a draft by the trustee of the standby trust will be deposited by the issuing institution into the standby trust in accordance with instructions from the trustee. The trustee of the standby trust fund must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(5) The wording of the standby trust fund must be identical to the wording specified in Section 264.151(n).

(i) *Surety bond for liability coverage.*

(1) An owner or operator may satisfy the requirements of this section by obtaining a surety bond that conforms to the requirements of this paragraph and submitting a copy of the bond to the Regional Administrator.

(2) The surety company issuing the bond must be among those listed as acceptable sureties on Federal bonds in the most recent Circular 570 of the U.S. Department of the Treasury.

(3) The wording of the surety bond must be identical to the wording specified in Section 264.151(l) of this part.

(4) A surety bond may be used to satisfy the requirements of this section only if the Attorneys General or Insurance Commissioners of (i) the State in which the surety is incorporated, and (ii) each State in which a facility covered by the surety bond is located have submitted a written statement to EPA that a surety bond executed as described in this section and Section 264.151(l) of this part is a legally valid and enforceable obligation in that State.

(j) *Trust fund for liability coverage.*

(1) An owner or operator may satisfy the requirements of this section by establishing a trust fund that conforms to the requirements of this paragraph and submitting an originally signed duplicate of the trust agreement to the Regional Administrator.

(2) The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(3) The trust fund for liability coverage must be funded for the full amount of the liability coverage to be provided by the trust fund before it may be relied upon to satisfy the requirements of this section. If at any time after the trust fund is created the amount of funds in the trust fund is reduced below the full amount of the liability coverage to be provided, the owner or operator, by the anniversary date of the establishment of the fund, must either add sufficient funds to the trust fund to cause its value to equal the full amount of liability coverage to be provided, or obtain other financial assurance as specified in this section to cover the difference. For purposes of this paragraph, "the full amount of the liability coverage to be provided" means the amount of coverage for sudden and/or nonsudden occurrences required to be provided by the owner or operator by this section, less the amount of financial assurance for liability coverage that is being provided by other financial assurance mechanisms being used to demonstrate financial assurance by the owner or operator.

(4) The wording of the trust fund must be identical to the wording specified in Section 264.151(m) of this part.

(k) Notwithstanding any other provision of this part, an owner or operator using liability insurance to satisfy the requirements of this section may use, until October 16, 1982, a Hazardous Waste Facility Liability Endorsement or Certificate of Liability Insurance that does not certify that the insurer is licensed to transact the business of insurance, or eligible as an excess or surplus lines insurer, in one or more States.

264.148 Incapacity of owners or operators, guarantors, or financial institutions.

(a) An owner or operator must notify the Regional Administrator by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the owner or operator as debtor, within 10 days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in Sections 264.143(f) and 264.145(f) must make such a notification if he is named as debtor, as required under the terms of the corporate guarantee (Section 264.151(h)).

(b) An owner or operator who fulfills the requirements of Sections 264.143, 264.145, or 264.147 by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The owner or operator must establish other financial assurance or liability coverage within 60 days after such an event.

264.149 Use of State-required mechanisms.

(a) For a facility located in a State where EPA is administering the requirements of this subpart but where the State has hazardous waste regulations that include requirements for financial assurance of closure or post-closure care or liability coverage, an owner or operator may use State-required financial mechanisms to meet the requirements of Section 264.143, Section 264.145, or Section 264.147, if the Regional Administrator determines that the State mechanisms are at least equivalent to the financial mechanism specified in this subpart. The Regional Administrator will evaluate the equivalency of the mechanisms principally in terms of (1) certainty of the availability of funds for the required closure or post-closure care activities or liability coverage and (2) the amount of funds that will be made available. The Regional Administrator may also consider other factors as he deems appropriate. The owner or operator must submit to the Regional Administrator evidence of the establishment of the mechanism together with a letter requesting that the State-required mechanism be considered acceptable for meeting the requirements of this subpart. The submission must include the following information: The facility's EPA Identification Number, name, and address, and the amount of funds for closure or post-closure care or liability coverage assured by the mechanism. The Regional Administrator will notify the owner or operator of his determination regarding the mechanism's acceptability in lieu of financial mechanisms specified in this subpart. The Regional Administrator may require the owner or operator to submit additional information as is deemed necessary to make this determination. Pending this determination, the owner or operator will be deemed to be in compliance with the requirements of Section 264.143, Section 264.145, or Section 264.147, as applicable.

(b) If a State-required mechanism is found acceptable as specified in paragraph (a) of this section except for the amount of funds available, the owner or operator may satisfy the requirements of this subpart by increasing the funds available through the State required mechanism or using additional financial mechanisms as specified in this subpart. The amount of funds available through the State and Federal mechanisms must at least equal the amount required by this subpart.

264.150 State assumption of responsibility.

(a) If a State either assumes legal responsibility for an owner's or operator's compliance with the closure, post-closure care, or liability requirements of this part or assures that funds will be available from State sources to cover those requirements, the owner or operator will be in compliance with the requirements of Sections 264.143, 264.145, or 264.147 if the Regional Administrator determines that the State's assumption of responsibility is at least equivalent to the financial mechanisms specified in this subpart. The Regional Administrator will evaluate the equivalency of State guarantees principally in terms of (1) certainty of the availability of funds for the required closure or post-closure care activities or liability coverage and (2) the amount of funds that will be made available. The Regional Administrator may also consider other factors as he deems appropriate. The owner or operator must submit to the Regional Administrator a letter from the State describing the nature of the State's assumption of responsibility together with a letter from the owner or operator requesting that the State's assumption of responsibility be considered acceptable for meeting the requirements of this subpart. The letter from the State must include, or have attached to it, the following information: the facility's EPA Identification Number, name, and address, and the amount of funds for closure or post-closure care or liability coverage that are guaranteed by the State. The Regional Administrator will notify the owner or operator of his determination regarding the acceptability of the State's guarantee in lieu of financial mechanisms specified in this subpart. The Regional Administrator may require the owner of operator to submit additional information as is deemed

necessary to make this determination. Pending this determination, the owner or operator will be deemed to be in compliance with the requirements of Sections 264.143, 264.145, or 264.147, as applicable.

(b) If a State's assumption of responsibility is found acceptable as specified in paragraph (a) of this section except for the amount of funds available, the owner or operator may satisfy the requirements of this subpart by use of both the State's assurance and additional financial mechanisms as specified in this subpart. The amount of funds available through the State and Federal mechanisms must at least equal the amount required by this subpart.

264.151 Wording of the instruments.

(a) (1) A trust agreement for a trust fund, as specified in Sections 264.143(a) or 264.145(a) or Sections 265.143(a) or 265.145(a) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Trust Agreement

Trust Agreement, the "Agreement," entered into as of[date] by and between [name of the owner or operator], a [name of State] [insert "corporation," "partnership," "association," or "proprietorship"], the "Grantor," and [name of corporate trustee], [insert "incorporated in the State of_____" or "a national bank"], the "Trustee."

Whereas, the United States Environmental Protection Agency, "EPA," an agency of the United States Government, has established certain regulations applicable to the Grantor, requiring that an owner or operator of a hazardous waste management facility shall provide assurance that funds will be available when needed for closure and/or post-closure care of the facility,

Whereas, the Grantor has elected to establish a trust to provide all or part of such financial assurance for the facilities identified herein,

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee.

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. *Definitions* As used in this Agreement:

(a) The term *"Grantor"* means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "*Trustee*" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. *Identification of Facilities and Cost Estimates* This Agreement pertains to the facilities and cost estimates identified on attached Schedule A [on Schedule A, for each facility list the EPA Identification Number, name, address, and the current closure and/or post-closure cost estimates, or portions thereof, for which financial assurance is demonstrated by this Agreement].

Section 3. *Establishment of Fund.* The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of EPA. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Granter established by EPA.

Section 4. *Payment for Closure and Post-Closure Care.* The Trustee shall make payments from the Fund as EPA Regional Administrator shall direct, in writing, to provide for the payment of the costs of closure and/ or post-closure care of the facilities covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by EPA Regional Administrator from the Fund for Closure and post-closure expenditures in such amounts as the EPA Regional Administrator shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the EPA Regional Administrator specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. *Payments Comprising the Fund.* Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. *Trustee Management.* The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. *Commingling and Investment.* The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. *Express Powers of Trustee.* Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. *Taxes and Expenses.* All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. *Annual Valuation.* The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the appropriate EPA Regional Administrator a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market

value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished the Grantor and the EPA Regional Administrator shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. *Advice of Counsel.* The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. *Trustee Compensation.* The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. *Successor Trustee.* The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the EPA Regional Administrator, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 14. *Instructions to the Trustee.* All orders, requests, and instructions by he Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the EPA Regional Administrator to the Trustee shall be in writing, signed by the EPA Regional Administrators of the Regions in which the facilities are located, or their designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or EPA hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or EPA, except as provided for herein.

Section 15. This Federal provision was not adopted by reference; see Paragraph (i)(4) for State requirements.

Section 16. *Amendment of Agreement.* This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the appropriate EPA Regional Administrator, or by the Trustee and the appropriate EPA Regional Administrator if the Grantor ceases to exist.

Section 17. *Irrevocability and Termination.* Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the EPA Regional Administrator, or by the Trustee and the EPA Regional Administrator, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 18. *Immunity and Indemnification.* The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the EPA Regional Administrator issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. *Choice of Law.* This Agreement shall be administered, construed, and enforced according to the laws of the State of [insert name of State].

Section 20. *Interpretation.* As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written: The parties below certify that the wording of this Agreement is identical to the wording specified in 40 CFR 264.151(a)(1) as such regulations were constituted on the date first above written.

[Signature of Grantor]
[Title]

Attest:
[Title]
[Seal]

[Signature of Trustee]

Attest:
[Title]
[Seal]

(2) The following is an example of the certification of acknowledgment which must accompany the trust agreement for a trust fund as specified in Sections 264.143(a) and 264.145(a) or Sections 265.143(a) or 265.145(a) of this chapter. State requirements may differ on the proper content of this acknowledgment.

State of _____
County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

[Signature of Notary Public]

(b) A surety bond guaranteeing payment into a trust fund, as specified in Sections 264.143(b) or 264.145(b) or Sections 265.143(b) or 265.145(b) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

FINANCIAL GUARANTEE BOND

Date bond executed:
Effective date:
Principal: [legal name and business address of owner or operator]
Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"]
State of incorporation:_____
Surety(ies): [name(s) and business address(es)]
EPA Identification Number, name, address, and closure and/or post-closure amount(s) for each facility guaranteed by this bond [indicate closure and post-closure amounts separately]: _____
Total penal sum of bond: $_____
Surety's bond number: _____

Know All Persons By These Presents, That we, the Principal and Surety(ies) hereto are firmly bound to the U.S. Environmental Protection Agency (hereinafter called EPA), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, under the Resource Conservation and Recovery Act as amended (RCRA), to have a permit or interim status in order to own or operate each hazardous waste management facility identified above, and

Whereas said Principal is required to provide financial assurance for closure, or closure and post-closure care, as a condition of the permit or interim status, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of the obligation are such that if the Principal shall faithfully, before the beginning of final closure of each facility identified above, fund the standby trust fund in the amount(s) identified above for the facility,

Or, if the Principal shall fund the standby trust fund in such amount(s) within 15 days after a final order to begin closure is issued by an EPA Regional Administrator or a U.S. district court or other court of competent jurisdiction,

Or, if the Principal shall provide alternate financial assurance, as specified in Subpart H of 40 CFR Parts 264 or 265, as applicable, and obtain the EPA Regional Administrator's written approval of such assurance, within 90 days after the date notice of cancellation is received by both the Principal and the EPA Regional Administrator(s) from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above. Upon notification by an EPA Regional Administrator that the Principal has failed to perform as guaranteed by this bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the EPA Regional Administrator.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal and to the EPA Regional Administrator(s) for the Region(s) in which the facility(ies) is (are) located, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by both the Principal and the EPA Regional Administrator(s), as evidenced by the return receipts.

The Principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the EPA Regional Administrator(s) of the EPA Region(s) in which the bonded facility(ies) is (are) located.

[The following paragraph is an *optional* rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure and/or post-closure amount, provided that the penal sum does not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of the EPA Regional Administrator(s).

In Witness Whereof, the Principal and Surety(ies) have executed this Financial Guarantee Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in 40 CFR 264.151(b) as such regulations were constituted on the date this bond was executed.

Principal

[Signature(s)]_____
[Name(s)] _____
[Title(s)] _____

[Corporate seal]_____-

Corporate Surety(ies)

[Name and address]
State of incorporation: _____
Liability limit: $ _____
[Signature(s)]
[Name(s) and title(s)]
[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]
Bond premium: $ _____

(c) A surety bond guaranteeing performance of closure and/or post-closure care, as specified in Sections 264.143(c) or 264.145(c), must be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted:

PERFORMANCE BOND

Date bond executed:_____
Effective date:_____
Principal: [legal name and business address of owner or operator]
Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"]
State of incorporation:_____
Surety(ies): [name(s) and business address(es)]
EPA Identification Number, name, address, and closure and/or post-closure amount(s) for each facility guaranteed by this bond [indicate closure and post-closure amounts separately]:
Total penal sum of bond: $ _____
Surety's bond number: _____

Know All Persons By These Presents, That we, the Principal and Surety(ies) hereto are firmly bound to the U.S. Environmental Protection Agency (hereinafter called EPA), in the above penal sum for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sum "jointly and severally" only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sum only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sum.

Whereas said Principal is required, under the Resource Conservation and Recovery Act as amended (RCRA), to have a permit in order to own or operate each hazardous waste management facility identified above, and

Whereas said Principal is required to provide financial assurance for closure, or closure and post-closure care, as a condition of the permit, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, Therefore, the conditions of this obligation are such that if the Principal shall faithfully perform closure, whenever required to do so, of each facility for which this bond guarantees closure, in accordance with the closure plan and other requirements of the permit as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations, as such laws, statutes, rules, and regulations may be amended,

And, if the Principal shall faithfully perform post-closure care of each facility for which this bond guarantees post-closure care, in accordance with the post-closure plan and other requirements of the permit, as such plan and permit may be amended, pursuant to all applicable laws, statutes, rules, and regulations as such laws, statutes, rules, and regulations may be amended,

Or, if the Principal shall provide alternate financial assurance as specified in Subpart H of 40 CFR Part 264, and obtain the EPA Regional Administrator's written approval of such assurance, within 90 days after the date notice of cancellation is received by both the Principal and EPA Regional Administrator(s) from the Surety(ies), then this obligation shall be null and void, otherwise it is to remain in full force and effect.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by EPA Regional Administrator that the Principal has been found in violation of the closure requirements of 40 CFR Part 264, for a facility for which this bond guarantees performance of closure, the Surety(ies) shall either perform closure in accordance with the closure plan and other permit requirements or place the closure amount guaranteed for the facility into the standby trust fund as directed by EPA Regional Administrator.

Upon notification by EPA Regional Administrator that the Principal has been found in violation of the post-closure requirements of 40 CFR Part 264, for a facility for which this bond guarantees performance of post-closure care, the Surety(ies) shall either perform post-closure care in accordance with the post-closure plan and other permit requirements or place the post-closure amount guaranteed for the facility into the standby trust fund as directed by the EPA Regional Administrator.

Upon notification by EPA Regional Administrator that the Principal has failed to provide alternate financial assurance as specified in Subpart H of 40 CFR Part 264, and obtain written approval of such assurance from the EPA Regional Administrator(s) during the 90 days following receipt by both the Principal and EPA Regional Administrator(s) of a notice of cancellation of the bond, the Surety(ies) shall place funds in the amount guaranteed for the facility(ies) into the standby trust fund as directed by the EPA Regional Administrator.

The Surety(ies) hereby waive(s) notification of amendments to closure plans, permits, applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the EPA Regional Administrator(s) for the Region(s) in which the facility(ies) is (are) located, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by both the Principal and EPA Regional Administrator(s), as evidenced by the return receipts.

The principal may terminate this bond by sending written notice to the Surety(ies), provided, however, that no such notice shall become effective until the Surety(ies) receive(s) written authorization for termination of the bond by the EPA Regional Administrator(s)of the EPA Region(s) in which the bonded facility(ies) is (are) located.

[The following paragraph is an optional rider that may be included but is not required.]

Principal and Surety(ies) hereby agree to adjust the penal sum of the bond yearly so that it guarantees a new closure and/or post-closure amount, provided that the penal sum does not increase by more than 20 percent in any one year, and no decrease in the penal sum takes place without the written permission of EPA Regional Administrator(s).

In Witness Whereof, The Principal and Surety(ies) have executed this Performance Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in 40 CFR 264.151(c) as such regulation was constituted on the date this bond was executed.

Principal

[Signature(s)]
[Name(s)]
[Title(s)]
[Corporate seal]

Corporate Surety(ies)

[Names and address]
State of incorporation: _____
Liability limit: $ _____
[Signature(s)]
[Names(s) and title(s)]
[Corporate seal]
[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]
Bond premium: $

(d) A letter of credit, as specified in Sections 264.143(d) or 264.145(d) or Sections 265.143(c) or 265.145(c) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

IRREVOCABLE STANDBY LETTER OF CREDIT

Regional Administrator(s)
Region(s)_____
U.S. Environmental Protection Agency

North Carolina Department of Environment, Health, and Natural Resources
Waste Management Division
Hazardous Waste Section
P.O. Box 29603
Raleigh, North Carolina 27611-9603

Dear Sir or Madam:

We hereby establish our Irrevocable Standby Letter of Credit No. ____ in your favor, at the request and for the account of [owner's or operator's name and address] up to the aggregate amount of [in words] U.S. dollars $ _____, available upon presentation [insert, if more than one Regional Administrator is a beneficiary, "by any one of you"] of

(1) your sight draft, bearing reference to this letter of credit No. _____, and
(2) your signed statement reading as follows: "I certify that the amount of the draft is payable pursuant to regulations issued under authority of the Resource Conservation and Recovery Act of 1976 as amended."

This letter of credit is effective as of [date] and shall expire on [date at least 1 year later], but such expiration date shall be automatically extended for a period of [at least 1 year] on [date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify both you and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event you are so notified, any unused portion of the credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by both you and [owner's or operator's name], as shown on the signed return receipts.

Whenever this letter of credit is drawn on, under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner's or operator's name] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in Section 264.151(d) as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution], [Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce," or "the Uniform Commercial Code"].

(e) A certificate of insurance, as specified in Section 264.143(e) or Section 264.145(e) or Section 265.143(d) or Section 265.145(d) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certificate of Insurance for Closure or Post-Closure Care

Name and Address of Insurer
(herein called the "Insurer"): _____
Name and Address of Insured
(herein called the "Insured"): _____
Facilities Covered: [List for each facility: The EPA Identification Number, name, address, and the amount of insurance for closure and/or the amount for post-closure care (these amounts for all facilities covered must total the face amount shown below).]

Face Amount: _____
Policy Number: _____
Effective Date: _____

The Insurer hereby certifies that it has issued to the Insured the policy of insurance identified above to provide financial assurance for [insert "closure" or "closure and post-closure care" or "post-closure care"] for the facilities identified above. The Insurer further warrants that such policy conforms in all respects with the requirements of 40 CFR 264.143(e), 264.145(e), 265.143(d) and 265.145(d), as applicable and as such regulations were constituted on the date shown immediately below. It is agreed that any provision of the policy inconsistent with such regulations is hereby amended to eliminate such inconsistency.

Whenever requested by the (EPA Regional Administrator(s), of the U.S. Environmental Protection Agency, the insurer agrees to furnish to to the EPA Regional Administrator(s) a duplicate original of the policy listed above, including all endorsements thereon.

I hereby certify that the wording of this certificate is identical to the wording specified in Section 264.151(e) as such regulations were constituted on the date shown immediately below.

[Authorized signature for Insurer]
[Name of person signing]
[Title of person signing]
Signature of witness or notary:_____
[Date]

(f) A letter from the chief financial officer, as specified in Section 264.143(f) or Section 264.145(f) or Section 265.143(e) or Section 265.145(e) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

LETTER FROM CHIEF FINANCIAL OFFICER

[Address to Regional Administrator of every Region in which facilities for which financial responsibility is to be demonstrated through the financial test are located]

[Address to the Department of Environment, Health, and Natural Resources, Hazardous Waste Section, Post Office Box 29603, Raleigh, North Carolina 27611-9603.]

I am the chief financial officer of [name and address of firm]. This letter is in support of this firm's use of the financial test to demonstrate financial assurance for closure and/or post-closure costs, as specified in Subpart H of 40 CFR Parts 264 and 265.

[Fill out the following four paragraphs regarding facilities and associated cost estimates. If your firm has no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA Identification Number, name, address, and current closure and/or post-closure cost estimates. Identify each cost estimate as to whether it is for closure or post-closure care.]

1. This firm is the owner or operator of the following facilities for which financial assurance for closure or post-closure care is demonstrated through the financial test specified in Subpart H of 40 CFR Parts 264 and 265. The current closure and/or post-closure cost estimates covered by the test are shown for each facility: _____.
2. This firm guarantees, through the guarantee specified in Subpart H of 40 CFR Parts 264 and 265, the closure or post-closure care of the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or post-closure care so guaranteed are shown for each facility:_____. The firm identified above is (insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee _____; or (3) engaged in the following substantial business relationship with the owner or operator _____, and receiving the following value in consideration of this guarantee _____). (Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter).

3. In States where EPA is not administering the financial requirements of Subpart H of 40 CFR Parts 264 or 265, this firm, as owner or operator or guarantor, is demonstrating financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in Subpart H of 40 CFR Parts 264 and 265. The current closure and/or post-closure cost estimates covered by such a test are shown for each facility: _____.
4. This firm is the owner or operator of the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated either to EPA or a State through the financial test or any other financial assurance mechanism specified in Subpart H of 40 CFR Parts 264 and 265 or equivalent or substantially equivalent State mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: _____.
5. This firm is the owner or operator of the following UIC facilities for which financial assurance for plugging and abandonment is required under part 144. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility:

This firm [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

[Fill in Alternative I if the criteria of paragraph (f)(1)(i) of Section 264.143 or 264.145, or of paragraph (e)(1)(i) of Sections 265.143 or 265.145 of this chapter are used. Fill in Alternative II if the criteria of paragraph (f)(1)(ii) of Section 264.143 or 264.145, or of paragraph (e)(1)(ii) of Section 265.143 or 265.145 of this chapter are used.]

ALTERNATIVE I

1.	Sum of current closure and post-closure cost estimates [total of all cost estimates shown in the five paragraphs above]	$_____
*2.	Total liabilities [if any portion of the closure or post-closure cost estimates is included in total liabilities, you may deduct the amount of that portion from this line and add that amount to lines 3 and 4].	$_____
*3.	Tangible net worth	$_____
*4.	Net worth	$_____
*5.	Current assets	$_____
*6.	Current liabilities	$_____
7.	Net working capital [line 5 minus line 6]	$_____
*8.	The sum of net income plus depreciation, depletion, and amortization	$_____
*9.	Total assets in U.S. (required only if less than 90% of firm's assets are located in the U.S.)	$_____

10. Is line 3 at least $10 million? (YES/NO)_____
11. Is line 3 at least 6 times line 1? (YES/NO)_____
12. Is line 7 at least 6 times line 1? (YES/NO)_____
*13. Are at least 90% of firm's assets located in the U.S.? (YES/NO)_____
If not, complete line 14. (YES/NO)_____
14. Is line 9 at least 6 times line 1? (YES/NO)_____
15. Is line 2 divided by line 4 less than 2.0? (YES/NO)_____
16. Is line 8 divided by line 2 greater than 0.1? (YES/NO)_____
17. Is line 5 divided by line 6 greater than 1.5? (YES/NO)_____

ALTERNATIVE II

1. Sum of current closure and post-closure cost estimates [total of

all cost estimates shown in the five paragraphs above] $_____

2. Current bond rating of most recent issuance of this firm and name of rating service $_____
3. Date of issuance of bond _____
4. Date of maturity of bond _____
*5. Tangible net worth [if any portion of the closure and post-closure cost estimates is included in "total liabilities" on your firm's financial statements, you may add the amount of that portion to this line] $_____
*6. Total assets in U.S. (required only if less than 90% of firm's assets are located in the U.S.) $_____

7. Is line 5 at least $10 million? (YES/NO)_____
8. Is line 5 at least 6 times line 1? (YES/NO)_____
*9. Are at least 90% of firm's assets located in the U.S.? (YES/NO)_____
If not, complete line 10. (YES/NO)_____
10. Is line 6 at least 6 times line 1? (YES/NO)_____

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR Section 264.151(f) as such regulations were constituted on the date shown immediately below.

[Signature]
[Name]
[Title]
[Date]

(g) A letter from the chief financial officer, as specified in Section 264.147(f) or 265.147(f) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

LETTER FROM CHIEF FINANCIAL OFFICER

[Address to Regional Administrator of every Region in which facilities for which financial responsibility is to be demonstrated through the financial test are located.]

[Address to North Carolina Department of Environment, Health, and Natural Resources, Waste Management Division, Hazardous Waste Section, Post Office Box 29603, Raleigh, N.C. 27611-9603.]

I am the chief financial officer of [firm's name and address]. This letter is in support of the use of the financial test to demonstrate financial responsibility for liability coverage [insert "and closure and/or post-closure care" if applicable] as specified in Subpart H of 40 CFR Parts 264 and 265.

[Fill out the following paragraphs regarding facilities and liability coverage. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA Identification Number, name, and address.]

The firm identified above is the owner or operator of the following facilities for which liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences is being demonstrated through the financial test specified in Subpart H of 40 CFR Parts 264 and 265: .

The firm identified above guarantees, through the guarantee specified in Subpart H of 40 CFR Parts 264 and 265, liability coverage for [insert "sudden" or "nonsudden" or "both sudden and nonsudden"] accidental occurrences at the following facilities owned or operated by the following: . The firm identified above is [insert one or more: (1) The direct or higher-tier parent corporation of the owner or operator; (2) owned by the same parent corporation as the parent corporation of the owner or operator, and receiving the following value in consideration of this guarantee _____; or (3) engaged in the following substantial business relationship with the owner or operator _____, and receiving the following value in consideration of this guarantee _____.]

[Attach a written description of the business relationship or a copy of the contract establishing such relationship to this letter.]

[If you are using the financial test to demonstrate coverage of both liability and closure and post-closure care, fill in the following five paragraphs regarding facilities and associated closure and post-closure cost estimates. If there are no facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, include its EPA identification number, name, address, and current closure and/or post-closure cost estimates. Identify each cost estimate as to whether it is for closure or post-closure care.]

1. The firm identified above owns or operates the following facilities for which financial assurance for closure or post-closure care or liability coverage is demonstrated through the financial test specified in Subpart H of 40 CFR Parts 264 and 265. The current closure and/or post-closure cost estimate covered by the test are shown for each facility: _____
2. The firm identified above guarantees, through the guarantee specified in Subpart H of 40 CFR Parts 264 and 265, the closure and post-closure care or liability coverage of the following facilities owned or operated by the guaranteed party. The current cost estimates for the closure or post-closure care so guaranteed are shown for each facility: _____
3. In States where EPA is not administering the financial requirements of Subpart H of 40 CFR Parts 264 and 265, this firm is demonstrating financial assurance for the closure or post-closure care of the following facilities through the use of a test equivalent or substantially equivalent to the financial test specified in Subpart H of 40 CFR Parts 264 and 265. The current closure or post-closure cost estimates covered by such a test are shown for each facility:. _____
4. The firm identified above owns or operates the following hazardous waste management facilities for which financial assurance for closure or, if a disposal facility, post-closure care, is not demonstrated either to EPA or a State through the financial test or any other financial assurance mechanism specified in Subpart H of 40 CFR Parts 264 and 265 or equivalent or substantially equivalent State mechanisms. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility: . _____
5. This firm is the owner or operator or guarantor of the following UIC facilities for which financial assurance for plugging and abandonment is required under part 144 and is assured through a financial test. The current closure cost estimates as required by 40 CFR 144.62 are shown for each facility:. _____

   This firm [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

   The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed fiscal year, ended [date].

Part A. Liability Coverage for Accidental Occurrences

[Fill in Alternative I if the criteria of paragraph (f)(1)(i) of Section 264.147 or Section 265.147 are used. Fill in Alternative II if the criteria of paragraph (f)(1)(ii) of Section 264.147 or 265.147 are used.]

ALTERNATIVE I

1. Amount of annual aggregate liability coverage to be demonstrated. $_____
*2. Current assets. $_____
*3. Current. $_____
4. Net working capital (line 2 minus line 3). $_____
*5. Tangible net worth. $_____
*6. If less than 90% or assets are located in the U.S., given total U.S. assets. $_____

7. Is line 5 at least $10 million? (YES/NO)_____
8. Is line 4 at least 6 times line 1? (YES/NO)_____

9. Is line 5 at least 6 times line 1? (YES/NO)_____
*10. Are at least 90% of assets located in the U.S.? If not, complete line 11. (YES/NO)_____
11. Is line 6 at least 6 times line 1? (YES/NO)_____

ALTERNATIVE II

1. Amount of annual aggregate liability coverage to be demonstrated. $_____
2. Current bond rating of most recent issuance and name of rating service. $_____
3. Date of issuance of bond. _____
4. Date of maturity of bond. _____
*5. Tangible net worth. $_____
*6. Total assets in U.S. (required only if less than 90% of assets are located in the U.S.). $_____

7. Is line 5 at least $10 million? (YES/NO)_____
8. Is line 5 at least 6 times line 1? (YES/NO)_____
*9. Are at least 90% of assets located in the U.S.? If not, complete line 10. (YES/NO)_____
10. Is line 6 at least 6 times line 1? (YES/NO)_____

[Fill in part B if you are using the financial test to demonstrate assurance of both liability coverage and closure or post-closure care.]

Part B. Closure or Post-Closure Care and Liability Coverage

[Fill in Alternative I if the criteria of paragraphs (f)(1)(i) of Section 264.143 or Section 264.145 and (f)(1)(i) of Section 264.147 are used or if the criteria of paragraphs (e)(1)(i) of Section 265.143 or 265.145 and (f)(1)(i) of Section 265.147 are used. Fill in Alternative II if the criteria of paragraphs (f)(1)(ii) of Section 264.143 or 264.145 and (f)(1)(ii) of Section 264.147 are used or if the criteria of paragraphs (e)(1)(i) of Section 265.143 or Section 265.145 and (f)(1)(ii) of Section 265.147 are used.]

ALTERNATIVE I

1. Sum of current closure and post-closure cost estimates (total of all cost estimates listed above). $_____
2. Amount of annual aggregate liability coverage to be demonstrated. $_____
3. Sum of lines 1 and 2. $_____
4. Total liabilities (if any portion of your closure or post-closure cost estimates is included in your total liabilities, you may deduct that portion from this line and add that amount to lines 5 and 6). $_____
*5. Tangible net worth. $_____
*6. Net worth. $_____
*7. Current assets. $_____
*8. Current liabilities. $_____
9. Net working capital (line 7 minus line 8). $_____
*10. The sum of net income plus depreciation, depletion, and amortization $_____
*11. Total assets in U.S. (required only if less than 90% of assets are located in the U.S.). $_____

12. Is line 5 at least $10 million? (YES/NO)_____
13. Is line 5 at least 6 times line 3? (YES/NO)_____
14. Is line 9 at least 6 times line 3? (YES/NO)_____
*15. Are at least 90% of assets located in the U.S.? (Yes/No) If not, complete line 16.
16. Is line 11 at least 6 times line 3? (YES/NO)_____
17. Is line 4 divided by line 6 less than 2.0? (YES/NO)_____
18. Is line 10 divided by line 4 greater than 0.1? (YES/NO)_____
19. Is line 7 divided by line 8 greater than 1.5? (YES/NO)_____

ALTERNATIVE II

1. Sum of current closure and post-closure cost estimates (total of **all** cost estimates listed above). $_____
2. Amount of annual aggregate liability coverage to be demonstrated. $_____
3. Sum of lines 1 and 2. $_____
4. Current bond rating of most recent issuance and name of rating service. $_____
5. Date of issuance of bond. _____
6. Date of maturity of bond. _____
*7. Tangible net worth (if any portion of the closure of post-closure cost estimates is included in "total liabilities" on your financial statements you may add that portion to this line). $_____
*8. Total assets in the U.S. (required only if less than 90% of assets are located in the U.S.). $_____

9. Is line 7 at least $10 million? (YES/NO)_____
10. Is line 7 at least 6 times line 3? (YES/NO)_____
*11. Are at least 90% of assets located in the U.S.? (Yes/No) If not, complete line 12.
12. Is line 8 at least 6 times line 3? (YES/NO)_____

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR 264.151(g) as such regulations were constituted on the date shown immediately below.
[Signature] _____
[Name] _____
[Title] _____
[Date] _____

(h)(1) A corporate guarantee, as specified in Section 264.143(f), or Section 264.145(f) or Section 265.143(e) or Section 265.145(e) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

CORPORATE GUARANTEE FOR CLOSURE OR POST-CLOSURE CARE

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of the State of [insert name of State], herein referred to as guarantor. This guarantee is made on behalf of the (owner or operator) of (business address), which is (one of the following: "our subsidiary"; "a subsidiary of (name and address of common parent corporation), of which guarantor is a subsidiary"; or "an entity with which guarantor has a substantial business relationship, as defined in 40 CFR (either 264.141(h) or 265.141(h)" to the United States Environmental Protection Agency (EPA).

RECITALS

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in 40 CFR 264.143(f), 264.145(f), 265.143(e), and 265.145(e).
2. [Owner or operator] owns or operates the following hazardous waste management facility(ies) covered by this guarantee: [List for each facility: EPA Identification Number, name, and address. Indicate for each whether guarantee is for closure, post-closure care, or both.]
3. "Closure plans" and "post-closure plans" as used below refer to the plans maintained as required by Subpart G or 40 CFR Parts 264 and Section 265 for the closure and post-closure care of facilities as identified above.
4. For value received from [owner or operator], guarantor guarantees to EPA that in the event that [owner or operator] fails to perform [insert "closure," "post-closure care" or "closure and post-closure care] of the above facility(ies) in accordance with the closure or post-closure plans and other permit or interim status requirements whenever required to do so, the guarantor shall do so or establish a trust fund as specified in Subpart H of 40 CFR Part 264 or 265, as applicable, in the name of [owner or operator] in the amount of the current closure or post-closure cost estimates as specified in Subpart H of 40 CFR Parts 264 and 265.
5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within 90 days, by certified mail, notice to the EPA Regional Administrator(s) for the Region(s) in which the facility(ies) is (are) located and to [owner or operator] that he

intends to provide alternate financial assurance as specified in Subpart H of 40 CFR Part 264 or Section 265, as applicable, in the name of [owner or operator]. Within 120 days after the end of such fiscal year, the guarantor shall establish such financial assurance unless [owner or operator] has done so.

6. The guarantor agrees to notify the EPA Regional Administrator by certified mail, of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.
7. Guarantor agrees that within 30 days after being notified by an EPA Regional Administrator of a determination that guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor of closure or post-closure care, he shall establish alternate financial assurance as specified in Subpart H of 40 CFR Part 264 or 265, as applicable, in the name of [owner or operator] unless [owner or operator] has done so.
8. Guarantor agrees to remain bound under this guarantee notwithstanding any or all of the following: amendment or modification of the closure or post-closure plan, amendment or modification of the permit, the extension or reduction of the time of performance of closure or post-closure, or any other modification or alteration of an obligation of the owner or operator pursuant to 40 CFR Part 264 or 265.
9. Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable financial assurance requirements of Subpart H of 40 CFR Parts 264 and 265 for the above-listed facilities, except as provided in paragraph 10 of this agreement.
10. (Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator):
Guarantor may terminate this guarantee by sending notice by certified mail to the EPA Regional Administrator(s) for the Region(s) in which the facility(ies) is(are) located and to (owner or operator), provided that this guarantee may not be terminated unless and until (the owner or operator) obtains, and the EPA Regional Administrator(s) approve(s), alternate closure and/or post-closure care coverage complying with 40 CFR 264.143, 264.145, 265.143, and/or 265.145.

(Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with its owner or operator).

Guarantor may terminate this guarantee 120 days following the receipt of notification, through certified mail, by the EPA Regional Administrator(s) for the Region(s) in which the facility(ies) is(are) located and by (the owner or operator).

11. Guarantor agrees that if [owner or operator] fails to provide alternate financial assurance as specified in Subpart H of 40 CFR Part 264 or 265, as applicable, and obtain written approval of such assurance from the EPA Regional Administrator(s) within 90 days after a notice of cancellation by the guarantor is received by an EPA Regional Administrator from guarantor, guarantor shall provide such alternate financial assurance in the name of [owner or operator].
12. Guarantor expressly waives notice of acceptance of this guarantee by the EPA or by [owner or operator]. Guarantor also expressly waives notice of amendments or modifications of the closure and/or post-closure plan and of amendments or modifications of the facility permit(s).

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR 264.151(h) as such regulations were constituted on the date first above written.

Effective date:_____
[Name of guarantor]_____

[Authorized signature for guarantor]_____
[Name of person signing]_____
[Title of person signing]_____
Signature of witness or notary:_____

(h)(2)A guarantee, as specified in Section 264.147(g) or Section 265.147(g) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

GUARANTEE FOR LIABILITY COVERAGE

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of [if incorporated within the United States insert "the State of_____" and insert name of State; if incorporated outside the

United States insert the name of the country in which incorporated, the principal place of business within the United States, and the name and address of the registered agent in the State of the principal place of business], herein referred to as guarantor. This guarantee is made on behalf of [owner or operator] of [business address], which is one of the following: "our subsidiary;" "a subsidiary of (name and address of common parent corporation), or which guarantor is a subsidiary;" or "an entity with which guarantor has a substantial business relationship, as defined in 40 CFR (either 264.141(h))", to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee.

RECITALS

1. Guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in 40 CFR 264.147(g) and 265.147(g).
2. [Owner or operator] owns or operates the following hazardous waste management facility(ies) covered by this guarantee: [List for each facility: EPA Identification Number, name, and address; and if guarantor is incorporated outside the United States list the name and address of the guarantor's registered agent in each State.] This corporate guarantee satisfies RCRA third-party liability requirements for [insert "sudden" or "nonsudden" or " both sudden and nonsudden"] accidental occurrences in above-named owner or operator facilities for coverage in the amount of [insert dollar amount] for each occurrence and [insert dollar amount] annual aggregate.
3. For value received from [owner or operator], guarantor guarantees to any and all third parties who have sustained or may sustain bodily injury or property damage caused by [sudden and/or nonsudden] accidental occurrences arising from operations of the facility(ies) covered by this guarantee that in the event that [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by [sudden and/or nonsudden] accidental occurrences, arising from the operation of the above-named facilities, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor will satisfy such judgment(s), award(s) or settlement agreement(s) up to the limits of coverage identified above.
4. Such obligation does not apply to any of the following:
   (a) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert owner or operator] would be obligated to pay in the absence of the contract or agreement.
   (b) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.
   (c) Bodily injury to:
      (1) An employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator]; or
      (2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert owner or operator]. This exclusion applies:
         (A) Whether [insert owner or operator] may be liable as an employer or in any other capacity; and
         (B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).
   (d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.
   (e) Property damage to:
      (1) Any property owned, rented, or occupied by [insert owner or operator];
      (2) Premises that are sold, given away or abandoned by [insert owner or operator] if the property damage arises out of any part of those premises;
      (3) Property loaned to [insert owner or operator];
      (4) Personal property in the care, custody or control of [insert owner or operator];
      (5) That particular part of real property on which [insert owner or operator] or any contractors or subcontractors working directly or indirectly on behalf of [insert owner or operator] are performing operations, if the property damage arises out of these operations.
5. Guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within 90 days, by certified mail, notice to the EPA Regional Administrator[s] for the Region[s] in which the facility[ies] is[are] located and to [owner or operator] that he intends to provide alternate liability coverage as specified in 40 CFR 264.147 and 265.147, as applicable, in the name of [owner or operator]. Within 120 days after the end of such fiscal year, the guarantor shall establish such liability coverage unless [owner or operator] has done so.

6. The guarantor agrees to notify the EPA Regional Administrator by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.
7. Guarantor agrees that within 30 days after being notified by an EPA Regional Administrator of a determination that guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor, he shall establish alternate liability coverage as specified in 40 CFR 264.147 or 265.147 in the name of [owner or operator], unless [owner or operator] has done so.
8. Guarantor reserves the right to modify this agreement to take into account amendment or modification of the liability requirements set by 40 CFR 264.147 and 265.147, provided that such modification shall become effective only if a Regional Administrator does not disapprove the modification within 30 days of receipt of notification of the modification.
9. Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable requirements of 40 CFR 264.147 and 265.147 for the above-listed facility(ies), except as provided in paragraph 10 of this agreement.
10. [Insert the following language if the guarantor is (a) a direct or higher-tier corporate parent, or (b) a firm whose parent corporation is also the parent corporation of the owner or operator]:

    Guarantor may terminate this guarantee by sending notice by certified mail to the EPA Regional Administrator(s) for the Region(s) in which the facility(ies) is(are) located and to [owner or operator], provided that this guarantee may not be terminated unless and until [the owner or operator] obtains, and the EPA Regional Administrator(s) approve(s), alternate liability coverage complying with 40 CFR 264.147 and/or 265.147.

    [Insert the following language if the guarantor is a firm qualifying as a guarantor due to its "substantial business relationship" with the owner or operator]:

    Guarantor may terminate this guarantee 120 days following receipt of notification, through certified mail, by the EPA Regional Administrator(s) for the Region(s) in which the facility(ies) is(are) located and by [the owner or operator].

11. Guarantor hereby expressly waives notice of acceptance of this guarantee by any party.
12. Guarantor agrees that this guarantee is in addition to and does not affect any other responsibility or liability of the guarantor with respect to the covered facilities.
13. The Guarantor shall satisfy a third-party liability claim only on receipt of one of the following documents:
    (a) Certification from the Principal and the third-party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

CERTIFICATION OF VALID CLAIM

The undersigned, as parties [insert Principal] and [insert name and address of third-party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [Principal's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $[ ].

[Signatures]_____
Principal_____

(Notary) Date_____
[Signatures]_____
Claimant(s)_____

(Notary) Date_____

    (b) A valid final court order establishing a judgment against the Principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Principal's facility or group of facilities.
14. In the event of combination of this guarantee with another mechanism to meet liability requirements, this guarantee will be considered [insert "primary" or "excess"] coverage.

I hereby certify that the wording of the guarantee is identical to the wording specified in 40 CFR 264.151(h)(2) as such regulations were constituted on the date shown immediately below.

Effective date: _____
[Name of guarantor]_____
[Authorized signature for guarantor]_____
[Name of person signing]_____
[Title of person signing]_____
Signature of witness of notary:_____

(i) A hazardous waste facility liability endorsement as required in Section 264.147 or Section 265.147 must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

HAZARDOUS WASTE FACILITY LIABILITY ENDORSEMENT

(1) This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering bodily injury and property damage in connection with the insured's obligation to demonstrate financial responsibility under 40 CFR 264.147 or Section 265.147. The coverage applies at [list EPA Identification Number, name, and address for each facility] for [insert "sudden accidental occurrences," "nonsudden accidental occurrences," or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's liability], exclusive of legal defense costs.

(2) The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions of the policy inconsistent with subsections (a) through (e) of this Paragraph 2 are hereby amended to conform with subsections (a) through (e):

(a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy to which this endorsement is attached.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in 40 CFR 264.147(f) or 265.147(f).

(c) Whenever requested by the a Regional Administrator of the U.S. Environmental Protection Agency (EPA), the Insurer agrees to furnish the Regional Administrator a signed duplicate original of the policy and all endorsements.

(d) Cancellation of this endorsement, whether by the Insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the Regional Administrator(s) of the EPA Region(s) in which the facility(ies) is(are) located.

(e) Any other termination of this endorsement will be effective only upon written notice and only after the expiration of thirty (30) days after a copy of such written notice is received by the Regional Administrator(s) of the EPA Region(s) in which the facility(ies) is(are) located..

Attached to and forming part of policy No. issued by [name of Insurer], herein called the Insurer, of [address of Insurer] to [name of insured] of [address] this day of , 19. The effective date of said policy is ___ day of ___, 19__.

I hereby certify that the wording of this endorsement is identical to the wording specified in Section 264.151(i) as such regulation was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

[Signature of Authorized Representative of Insurer]

[Type name]
[Title], Authorized Representative of [name of Insurer]
[Address of Representative]

(j) A certificate of liability insurance as required in Sections 264.147 or 265.147 must be worded as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted:

HAZARDOUS WASTE FACILITY CERTIFICATE OF LIABILITY INSURANCE

1. [Name of Insurer], (the "Insurer"), of [address of Insurer] hereby certifies that it has issued liability insurance covering bodily injury and property damage to [name of insured], (the "insured"), of [address of insured] in connection with the insured's obligation to demonstrate financial responsibility under 40 CFR 264.147 or 265.147. The coverage applies at [list EPA Identification Number, name, and address for each facility] for [insert "sudden accidental occurrences," "nonsudden accidental occurrences," or "sudden and nonsudden accidental occurrences"; if coverage is for multiple facilities and the coverage is different for different facilities, indicate which facilities are insured for sudden accidental occurrences, which are insured for nonsudden accidental occurrences, and which are insured for both]. The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's liability], exclusive of legal defense costs. The coverage is provided under policy number _____, issued on [date]. The effective date of said policy is [date].
2. The Insurer further certifies the following with respect to the insurance described in Paragraph 1:
   (a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy.
   (b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy with a right of reimbursement by the insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in 40 CFR 264.147(f) or 265.147(f).
   (c) Whenever requested by a Regional Administrator of the U.S. Environmental Protection Agency (EPA), the Insurer agrees to furnish to the Regional Administrator a signed duplicate original of the policy and all endorsements.
   (d) Cancellation of the insurance, whether by the Insurer, the insured, a parent corporation providing insurance coverage for its subsidiary, or by a firm having an insurable interest in and obtaining liability insurance on behalf of the owner or operator of the hazardous waste management facility, will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the Regional Administrator(s) of the EPA Region(s) in which the facility(ies) is(are) located.
   (e) Any other termination of the insurance will be effective only upon written notice and only after the expiration of thirty (30) days after a copy of such written notice is received by the Regional Administrator(s) of the EPA Region(s) in which the facility(ies) is (are) located.

   I hereby certify that the wording of this instrument is identical to the wording specified in 40 CFR 264.151(j) as such regulation was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

   [Signature of authorized representative of Insurer]
   [Type name]
   [Title], Authorized Representative of [name of Insurer]
   [Address of Representative]

(k) A letter of credit, as specified in Section 264.147(h) or Section 265.147(h) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

IRREVOCABLE STANDBY LETTER OF CREDIT

Name and Address of Issuing Institution _____
Regional Administrator(s) _____
Region(s) _____
U.S. Environmental Protection Agency _____

Department of Environment, Health, and Natural Resources
Hazardous Waste Section
P.O. Box 29603
Raleigh, North Carolina 27611-9603

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. _____ in the favor of ("any and all third-party liability claimants" or insert name of trustee of the standby trust fund), at the request and for the account of [owner or operator's name and address] for third-party liability awards or settlements up to [in words] U.S. dollars $_____ per occurrence and the annual aggregate amount of [in words] U.S. dollars $_____ for sudden accidental occurrences and/or for third-party liability awards or settlements up to the amount of [in words] U.S. dollars $_____ per occurrence, and the annual aggregate amount of [in words] U.S. dollars $_____ for nonsudden accidental occurrences available upon presentation of a sight draft bearing reference to this letter of credit No. _____ and (insert the following language if the letter of credit is being used without a standby trust fund: "(1) a signed certificate reading as follows:

Certification of Valid Claim

The undersigned, as parties [insert principal] and [insert name and address of third-party claimants], hereby certify that the claim of bodily injury (and/or) property damage caused by a [sudden or nonsudden] accidental occurrence arising from operations of [principal's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $_____. We hereby certify that the claim does not apply to any of the following:

(a) Bodily injury or property damage for which [insert principal] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert principal] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert principal] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee of [insert principal] arising from, and in the course of, employment by [insert principal]; or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert principal].

This exclusion applies:

(A) Whether [insert principal] may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:

(1) Any property owned, rented, or occupied by [insert principal];

(2) Premises that are sold, given away or abandoned by [insert principal] if the property damage arises out of any part of those premises;

(3) Property loaned to [insert Principal];

(4) Personal property in the care, custody or control of [insert principal];

(5) That particular part of real property on which [insert principal] or any contractors or subcontractors working directly or indirectly on behalf of [insert principal] are performing operations, if the property damage arises out of these operations.

[Signatures]_____
[Grantor]_____
[Signatures]_____
[Claimant(s)]_____

or (2) a valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from operation of the Grantor's facility or group of facilities.

This letter of credit is effective as of (date) and shall expire on (date at least one year later), but such expiration date shall be automatically extended for a period of (at least one year) on (date) and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify you, the U.S. EPA Regional Administrator for Region [Region #], and [owner's or operator's name] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us.

(Insert the following language if a standby trust fund is not being used: "In the event that this letter of credit is used in combination with another mechanism for liability coverage, this letter of credit shall be considered [insert "primary" or "excess"] coverage)."

We certify that the wording of this letter of credit is identical to the wording specified in 40 CFR 264.151(k) as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution]
[Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce" or "the Uniform Commercial Code"]).

(l) A surety bond, as specified in Section 264.147(h) or Section 265.147(h) of this chapter, must be worded as follows: except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Payment Bond

Surety Bond No. [Insert number]

Parties [Insert name and address of owner or operator], Principal, incorporated in [Insert State of incorporation] of [Insert city and State of principal place of business] and [Insert name and address of surety company(ies)], Surety Company(ies), of (Insert surety(ies) place of business].

EPA Identification Number, name, and address for each facility guaranteed by this bond: _____

	Sudden accidental occurrences	Nonsudden accidental occurrences
Penal Sum Per Occurrence	[insert amount]	[insert amount]
Annual Aggregate.	[Insert amount]	[insert amount]

Purpose: This is an agreement between the Surety(ies) and the Principal under which the Surety(ies), its (their) successors and assignees, agree to be responsible for the payment of claims against the Principal for bodily injury and/or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental occurrences arising from operations of the facility or group of facilities in the sums prescribed herein; subject to the governing provisions and the following conditions.

Governing Provisions:

(1) Section 3004 of the Resource Conservation and Recovery Act of 1976, as amended.
(2) Rules and regulations of the U.S. Environmental Protection Agency (EPA), particularly 40 CFR ["Section 264.147" or "Section 265.147"] (if applicable).
(3) Rules and regulations of the governing State agency (if applicable) [insert citation].

Conditions:

(1) The Principal is subject to the applicable governing provisions that require the Principal to have and maintain liability coverage for bodily injury and property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental occurrences arising from operations of the facility or group of facilities. Such obligation does not apply to any of the following:
   (a) Bodily injury or property damage for which [insert principal] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert principal] would be obligated to pay in the absence of the contract or agreement.
   (b) Any obligation of [insert principal] under a workers' compensation, disability benefits, or unemployment compensation law or similar law.
   (c) Bodily injury to:
      (1) An employee of [insert principal] arising from, and in the course of, employment by [insert principal]; or
      (2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert principal]. This exclusion applies:
         (A) Whether [insert principal] may be liable as an employer or in any other capacity; and
         (B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).
   (d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.
   (e) Property damage to:
      (1) Any property owned, rented, or occupied by [insert principal];
      (2) Premises that are sold, given away or abandoned by [insert principal] if the property damage arises out of any part of those premises;
      (3) Property loaned to [insert principal];
      (4) Personal property in the care, custody or control of [insert principal];
      (5) That particular part of real property on which [insert principal] or any contractors or subcontractors working directly or indirectly on behalf of [insert principal] are performing operations, if the property damage arises out of these operations.
(2) This bond assures that the Principal will satisfy valid third party liability claims, as described in condition 1.
(3) If the Principal fails to satisfy a valid third party liability claim, as described above, the Surety(ies) becomes liable on this bond obligation.
(4) The Surety(ies) shall satisfy a third party liability claim only upon the receipt of one of the following documents:
   (a) Certification from the Principal and the third party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as parties [insert name and address of Principal] and [insert name and address of third party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [Principal's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $[ ].

[Signature]
Principal

[Notary] Date

[Signature(s)]
Claimant(s)

[Notary] Date

or (b) A valid final court order establishing a judgment against the Principal for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Principal's facility or group of facilities.

(5) In the event of combination of this bond with another mechanism for liability coverage, this bond will be considered [insert "primary" or "excess"] coverage.
(6) The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the aggregate to the penal sum of the bond. In no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum, provided that the Surety(ies) furnish(es) notice to the Regional Administrator forthwith of all claims filed and payments made by the Surety(ies) under this bond.
(7) The Surety(ies may cancel the bond by sending notice of cancellation by certified mail to the Principal and the US EPA Regional Administrator for Region [Region #], provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by the Principal and the Regional Administrator, as evidenced by the return receipt.
(8) The Principal may terminate this bond by sending written notice to the Surety(ies) and to the EPA Regional Administrator(s) of the EPA Region(s) in which the bonded facility(ies) is (are) located.
(9) The Surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules and regulations and agree(s) that no such amendment shall in any way alleviate its (their) obligation on this bond.
(10) This bond is effective from [insert date] 12:01 a.m. standard time, at the address of the Principal as stated herein) and shall continue in force until terminated as described above.

In Witness Whereof, the Principal and Surety(ies) have executed this Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in 40 CFR 264.151(1), as such regulations were constituted on the date this bond was executed.

PRINCIPAL

[Signature(s)]
[Name(s)]
[Title(s)]
[Corporate Seal]

CORPORATE SURETY[IES]

[Name and address]
State of incorporation: _____
Liability Limit: $ _____
[Signature(s)]
[Name(s) and title(s)]
[Corporate seal]
[Corporate seal]
[For every co-surety, provide signature(s),
corporate seal, and other information in the same manner as for Surety above.]
Bond premium: $ _____

(m)(1)A trust agreement, as specified in Section 264.147(j) or Section 265.147(j) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

TRUST AGREEMENT

Trust Agreement, the "Agreement," entered into as of [date] by and between [name of the owner or operator] a [name of State] [insert "corporation," "partnership," "association," or "proprietorship"], the "Grantor," and [name of corporate trustee], [insert, "incorporated in the State of _____" or "a national bank"], the "trustee."

Whereas, the United States Environmental Protection Agency, "EPA," an agency of the United States Government, has established certain regulations applicable to the Grantor, requiring that an owner or operator of a hazardous waste management facility or group of facilities must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

Whereas, the Grantor has elected to establish a trust to assure all or part of such financial responsibility for the facilities identified herein.

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee.

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. *Definitions.* As used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. *Identification of Facilities.* This agreement pertains to the facilities identified on attached schedule A [on schedule A, for each facility list the EPA identification Number, name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this Agreement].

Section 3. *Establishment of Fund.* The Grantor and the Trustee hereby establish a trust fund, hereinafter the "Fund," for the benefit of any and all third parties injured or damaged by [sudden and/or nonsudden] accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amounts of _____ [up to $1 million] per occurrence and _____ [up to $2 million] annual aggregate for sudden accidental occurrences and _____ [up to $3 million] per occurrence and _____[up to $6 million] annual aggregate for nonsudden occurrences, except that the Fund is not established for the benefit of third parties for the following:

(a) Bodily injury or property damage for which [insert Grantor] is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that [insert Grantor] would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of [insert Grantor] under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:
  (1) An employee of [insert Grantor] arising from, and in the course of, employment by [insert Grantor]; or
  (2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by [insert Grantor]. This exclusion applies:
    (A) Whether [insert Grantor] may be liable as an employer or in any other capacity; and
    (B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:
  (1) Any property owned, rented, or occupied by [insert Grantor];
  (2) Premises that are sold, given away or abandoned by [insert Grantor] if the property damage arises out of any part of those premises;
  (3) Property loaned to [insert Grantor];
  (4) Personal property in the care, custody or control of [insert Grantor];
  (5) That particular part of real property on which [insert Grantor] or any contractors or subcontractors working directly or indirectly on behalf of [insert Grantor] are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the fund shall be considered [insert "primary" or "excess"] coverage.

The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to

this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by EPA.

Section 4. *Payment for Bodily Injury or Property Damage.* The Trustee shall satisfy a third party liability claim by making payments from the Fund only upon receipt of one of the following documents:

(a) Certification from the Grantor and the third party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as parties [insert Grantor] and [insert name and address of third party claimant(s)], hereby certify that the claim of bodily injury and/or property damage caused by a [sudden or nonsudden] accidental occurrence arising from operating [Grantor's] hazardous waste treatment, storage, or disposal facility should be paid in the amount of $[ ].

[Signatures]
Grantor

[Signatures]
Claimant(s)

(b) A valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Grantor's facility or group of facilities.

Section 5. *Payments Comprising the Fund.*
Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee.

Section 6. *Trustee Management.* The Trustee shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstance then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or *held* unless they are securities or other obligations of the Federal or a State government;
(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or State government; and
(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. *Commingling and Investment.* The Trustee is expressly authorized in its discretion:
(a) To transfer from time to time any or all of the assets of the Fund to any common commingled, or collective trust fund created by the Trustee in which the fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 81a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. *Express Powers of Trustee.* Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:
(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition:

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted:

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depositary even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund:

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. *Taxes and Expenses.* All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. *Annual Valuations.* The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the appropriate EPA Regional Administrator a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the Fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the EPA Regional Administrator shall constitute a conclusively binding assent by the Grantor barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Section 11. *Advice of Counsel.* The Trustee may from time to time consult with counsel, who may be counsel to the Grantor with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 12. *Trustee Compensation.* The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 13. *Successor Trustee.* The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the EPA Regional Administrator, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this section shall be paid as provided in Section 9.

Section 14. *Instructions to the Trustee.* All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendments to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the EPA Regional Administrator to the Trustee shall be in writing, signed by the EPA Regional Administrators of the Regions in which the facilities are located, or their designees, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or EPA hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or EPA, except as provided for herein.

Section 15. *Notice of Nonpayment.* If a payment for bodily injury or property damage is made under Section 4 of this trust, the Trustee shall notify the Grantor of such payment and the amount(s) thereof within five (5) working days. The Grantor shall, on or before the anniversary date of the establishment of the Fund following such notice, either make

payments to the Trustee in amounts sufficient to cause the trust to return to its value immediately prior to the payment of claims under Section 4, or shall provide written proof to the Trustee that other financial assurance for liability coverage has been obtained equalling the amount necessary to return the trust to its value prior to the payment of claims. If the Grantor does not either make payments to the Trustee or provide the Trustee with such proof, the Trustee shall within 10 working days after the anniversary date of the establishment of the Fund provide a written notice of nonpayment to the EPA Regional Administrator.

Section 16. *Amendment of Agreement.* This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the appropriate EPA Regional Administrator, or by the Trustee and the appropriate EPA Regional Administrator if the Grantor ceases to exist.

Section 17. *Irrevocability and Termination.* Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the EPA Regional Administrator, or by the Trustee and the EPA Regional Administrator, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.
The Regional Administrator will agree to termination of the Trust when the owner or operator substitutes alternate financial assurance as specified in this section.

Section 18. *Immunity and Indemnification.* The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the EPA Regional Administrator issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 19. *Choice of Law.* This Agreement shall be administered, construed, and enforced according to the laws of the State of [enter name of State].

Section 20. *Interpretation.* As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in 40 CFR 264.151(m) as such regulations were constituted on the date first above written.

_____

[Signature of Grantor]
[Title]
Attest:
[Title]
[Seal]

_____

[Signature of Trustee]
Attest:
[Title]
[Seal]

(m)(2) The following is an example of the certification of acknowledgement which must accompany the trust agreement for a trust fund as specified in Sections 264.147(j) or 265.147(j) of this chapter. State requirements may differ on the proper content of this acknowledgement.

State of _____

County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

_____

[Signature of Notary Public]

_____

(n)(1) A standby trust agreement, as specified in Section 264.147(h) or 265.147(h) of this chapter, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Standby Trust Agreement

Trust Agreement, the "Agreement," entered into as of (date) by and between (name of the owner or operator) a (name of a State) (insert "corporation," "partnership," "association," or "proprietorship"), the "Grantor," and (name of corporate trustee), (insert, "incorporated in the State of _____" or "a national bank"), the "trustee."

Whereas the United States Environmental Protection Agency, "EPA," an agency of the United States Government, has established certain regulations applicable to the Grantor, requiring that an owner ow operator of a hazardous waste management facility or group of facilities must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental and/or nonsudden accidental occurrences arising from operations of the facility or group of facilities.

Whereas, the Grantor has elected to establish a standby trust into which the proceeds from a letter of credit may be deposited to assure all or part of such financial responsibility for the facilities identified herein.

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee.

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. *Definitions.* As used in this Agreement:

(a) The term Grantor means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term Trustee means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. *Identification of Facilities.* This agreement pertains to the facilities identified on attached schedule A (on schedule A, for each facility list the EPA Identification Number, name, and address of the facility(ies) and the amount of liability coverage, or portions thereof, if more than one instrument affords combined coverage as demonstrated by this Agreement).

Section 3. *Establishment of Fund.* The Grantor and the Trustee hereby establish a standby trust fund, hereafter the "Fund," for the benefit of any and all third parties injured or damaged by (sudden and/or nonsudden) accidental occurrences arising from operation of the facility(ies) covered by this guarantee, in the amounts of _____ (up to $1 million) per occurrence and _____ (up to $2 million) annual aggregate for sudden accidental occurrences and _____ (up to $3 million) per occurrence and _____ (up to $6 million) annual aggregate for nonsudden occurrences, except that the Fund is not established for the benefit of third parties for the following:

(a) Bodily injury or property damage for which (insert Grantor) is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that (insert Grantor) would be obligated to pay in the absence of the contract or agreement.

(b) Any obligation of (insert Grantor) under a workers' compensation, disability benefits, or unemployment compensation law or any similar law.

(c) Bodily injury to:

(1) An employee or (insert Grantor) arising from, and in the course of, employment by (insert Grantor); or

(2) The spouse, child, parent, brother or sister of that employee as a consequence of, or arising from, and in the course of employment by (insert Grantor).

This exclusion applies:

(A) Whether (insert Grantor) may be liable as an employer or in any other capacity; and

(B) To any obligation to share damages with or repay another person who must pay damages because of the injury to persons identified in paragraphs (1) and (2).

(d) Bodily injury or property damage arising out of the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle or watercraft.

(e) Property damage to:
(1) Any property owned, rented, or occupied by (insert Grantor);
(2) Premises that are sold, given away or abandoned by (insert Grantor) if the property damage arises out of any part of those premises;
(3) Property loaned (insert Grantor):
(4) Personal property in the care, custody or control of (insert Grantor);
(5) That particular part of real property on which (insert Grantor) or any contractors or subcontractors working directly or indirectly on behalf of (insert Grantor) are performing operations, if the property damage arises out of these operations.

In the event of combination with another mechanism for liability coverage, the fund shall be considered (insert "primary" or "excess") coverage.

The Fund is established initially as consisting of the proceeds of the letter of credit deposited into the Fund. Such proceeds and any other property subsequently transferred to the Trustee is referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by EPA.

Section 4. *Payment for Bodily Injury or Property Damage.* The Trustee shall satisfy a third party liability claim by drawing on the letter of credit described in Schedule B and by making payments from the Fund only upon receipt of one of the following documents:

(a) Certification from the Grantor and the third party claimant(s) that the liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as parties (insert Grantor) and (insert name and address of third party claimant(s)),-hereby certify that the claim of bodily injury and/or property damage caused by a (sudden or nonsudden) accidental occurrence arising from operating (Grantor's) hazardous waste treatment, storage, or disposal facility should be paid in the amount of $( ).

(Signature) _____
Grantor _____
(Signatures) _____
Claimant(s) _____

(b) A valid final court order establishing a judgment against the Grantor for bodily injury or property damage caused by sudden or nonsudden accidental occurrences arising from the operation of the Grantor's facility or group of facilities.

Section 5. *Payments Comprising the Fund.* Payments made to the Trustee for the Fund shall consist of the proceeds from the letter of credit drawn upon by the Trustee in accordance with the requirements of 40 CFR 264.151(k) and Section 4 of this Agreement.

Section 6. *Trustee Management.* The Trustee shall invest and reinvest the principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiary with such matters, would use in the conduct of an interprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or a State government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. *Commingling and Investment.* The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. *Express Powers of Trustee.* Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted.

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depositary even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve Bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. *Taxes and Expenses.* All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements to the Trustee shall be paid from the Fund.

Section 10. *Advise of Counsel.* The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. *Trustee Compensation.* The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 12. *Successor Trustee.* The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same poweres and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment; the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, the EPA Regional Administrator and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. *Instructions to the Trustee.* All orders, requests, certifications of valid claims, and instructions to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendments to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of

any person to act on behalf of the Grantor or the EPA Regional Administrator hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or EPA, except as provided for herein.

Section 14. *Amendment of Agreement.* This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the EPA Regional Administrator, or by the Trustee and the EPA Regional Administrator if the Grantor ceases to exist.

Section 15. *Irrevocability and Termination.* Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the EPA Regional Administrator, or by the Trustee and the EPA Regional Administrator, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be paid to the Grantor.
The Regional Administrator will agree to termination of the Trust when the owner or operator substitutes alternative financial assurance as specified in this section.

Section 16. *Immunity and indemnification.* The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor and the EPA Regional Administrator issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonable incurred in its definse in the event the Grantor fails to provide such defense.

Section 17. *Choice of Law.* This Agreement shall be administered, construed, and enforced according to the laws of the State of (enter name of State).

Section 18. *Interpretation.* As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation of the legal efficacy of this Agreement.

In Witness Whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in 40 CFR 264.151(n) as such regulations were constituted on the date first above written.

_____

(Signature of Grantor)
(Title)
Attest:
(Title)
(Seal)

(Signature of Trustee)
Attest:
(Title)
Seal)

_____

(2) The following is an example of the certification of acknowledgement which must accompany the trust agreement for a standby trust fund as specified in section 264.147(h) or 265.147(h) of this chapter. State requirements may differ on the proper content of this acknowledgement.

State of _____

County of _____

On this (date), before me personally came (owner or operator) to me known, who, being by me duly sworn, did depose and say that she/he resides at (address), that she/he is (title) of (corporation), the corporation described in and which executed the above instrument: that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that she/he signed her/his name thereto by like order.

(j) 40 CFR 264.170 through 264.179 (Subpart I), "Use and Management of Containers", are incorporated by reference including subsequent amendments and editions.

SUBPART I - USE AND MANAGEMENT OF CONTAINERS

264.170 Applicability.

The regulations in the subpart apply to owners and operators of all hazardous waste facilities that store containers of hazardous waste, except as Section 264.1 provides otherwise.

[Comment: Under Section 261.7 and Section 261.33(c), if a hazardous waste is emptied from a container the residue remaining in the container is not considered a hazardous waste if the container is "empty" as defined in Section 261.7. In that event, management of the container is exempt from the requirements of this subpart.]

264.171 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 owner or operator must transfer the hazardous waste from this container to a container that is in good condition or manage the waste in some other way that complies with the requirements of this part.

264.172 Compatibility of waste with containers.

The owner or operator must use a container made of or lined with materials which will not react with, and are otherwise compatible with, the hazardous waste to be stored, so that the ability of the container to contain the waste is not impaired.

264.173 Management of containers.

(a) A container holding hazardous waste must always be closed during storage, except when it is necessary to add or remove waste.
(b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

[Comment: Reuse of containers in transportation is governed by U.S. Department of Transportation regulations including those set forth in 49 CFR 173.28.]

264.174 Inspections.

At least weekly, the owner or operator must inspect areas where containers are stored, looking for leaking containers and for deterioration of containers and the containment system caused by corrosion or other factors.

[Comment: See Sections 264.15(c) and 264.171 for remedial action required if deterioration or leaks are detected.]

264.175 Containment

(a) Container storage areas must have a containment system that is designed and operated in accordance with paragraph (b) of this section, except as otherwise provided by paragraph (c) of this section.
(b) A containment system must be designed and operated as follows:
    (1) A base must underlie the containers which are free of cracks or gaps and are sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;

(b) A containment system must be designed and operated as follows:
  (1) A base must underlie the containers which are free of cracks or gaps and are sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;
  (2) The base must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or are otherwise protected from contact with accumulated liquids;
  (3) The containment system must have sufficient capacity to contain 10% of the volume of containers or the volume of the largest container, whichever is greater. Containers that do not contain free liquids need not be considered in this determination;
  (4) Run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to that required in paragraph (b)(3) of this section to contain any run-on which might enter the system; and
  (5) Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system.

[Comment: If the collected material is a hazardous waste under Part 261 of this chapter it must be managed as a hazardous waste in accordance with all applicable requirements of Parts 262-266 of this chapter. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of Section 402 of the Clean Water Act, as amended.]

(c) Storage areas that store containers holding only wastes that do not contain free liquids need not have a containment system defined by paragraph (b) of this section, except as provided by paragraph (d) of this section or provided that:
  (1) The storage area is sloped or is otherwise designed and operated to drain and remove liquid resulting from precipitation; or
  (2) The containers are elevated or are otherwise protected from contact with accumulated liquid.
(d) Storage areas that store containers holding the wastes listed below that do not contain free liquids must have a containment system defined by paragraph (b) of this section:
  (1) FO20, FO21, FO22, FO23, FO26, and FO27.
  (2) [Reserved]

264.176 Special requirements for ignitable or reactive waste.

Containers holding ignitable or reactive waste must be located at least 15 meters (50 feet) from the facility's property line.
[Comment: See Section 264.17(a) for additional requirements.]

264.177 Special requirements for incompatible wastes.

(a) Incompatible wastes, or incompatible wastes and materials (See Appendix V for examples), must not be placed in the same container, unless Section 264.17(b) is complied with.
(b) Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material.

[Comment: As required by Section 264.13, the waste analysis plan must include analyses needed to comply with Section 264.177. Also, Section 264.17(c) requires wastes analyses, trial tests or other documentation to assure compliance with Section 264.17(b). As required by Section 264.73, the owner or operator must place the results of each waste analysis and trial test, and any documented information, in the operating record of the facility.]

(c) A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

[Comment: The purpose of this section is to prevent fires, explosions, gaseous emission, leaching, or other discharge of hazardous waste or hazardous waste constituents which could result from the mixing of incompatible wastes or materials if containers break or leak.]

264.178 Closure.

At closure, all hazardous waste and hazardous waste residues must be removed from the containment system. Remaining containers, liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed.

[Comment: At closure, as throughout the operating period, unless the owner or operator can demonstrate in accordance with Section 261.3(d) of this chapter that the solid waste removed from the containment system is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of parts 262-266 of this chapter.]

264.179 Air Emission Standards.

The owner or operator shall manage all hazardous waste placed in a container in accordance with the applicable requirements of subparts AA, BB, and CC of this part.

(k) 40 CFR 264.190 through 264.200 (Subpart J), "Tank Systems", are incorporated by reference including subsequent amendments and editions.

SUBPART J - TANKS

264.190 Applicability.

The requirements of this subpart apply to owners and operators of facilities that use tank systems for storing or treating hazardous waste except as otherwise provided in paragraphs (a), (b), and (c) of this section or in Section 264.1 of this part.

(a) Tanks that are used to store or treat hazardous waste which contains no free liquids and are situated inside a building with an impermeable floor are exempted from the requirements in 264.193. To demonstrate the absence or presence of free liquids in the stored/treated waste, the following test must be used: Method 9095 [Paint Filter Liquids Test] as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of this chapter.

(b) Tank systems, including sumps, as defined in 260.10, that serve as part of a secondary containment system to collect or contain releases of hazardous wastes are exempted from the requirements in 264.193(a).

(c) Tanks, sumps, and other such collection devices or systems used in conjunction with drip pads, as defined in Section 260.10 of this chapter and regulated under 40 CFR part 264 subpart W, must meet the requirements of this subpart.

264.191 Assessment of existing tank system's integrity.

(a) For each existing tank system that does not have secondary containment meeting the requirements of 264.193, the owner or operator must determine that the tank system is not leaking or is unfit for use. Except as provided in paragraph (c) of this section, the owner or operator must obtain and keep on file at the facility a written assessment reviewed and certified by an independent, qualified registered professional engineer, in accordance with 270.11(d), that attests to the tank system's integrity by January 12, 1988.

(b) This assessment must determine that the tank system is adequately designed and has sufficient structural strength and compatibility with waste(s) to be stored or treated, to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment must consider the following:
  (1) Design standard(s), if available, according to which the tank and ancillary equipment were constructed;
  (2) Hazardous characteristics of the waste(s) that have been and will be handled;
  (3) Existing corrosion protection measures;
  (4) Documented age of the tank system, if available (otherwise, an estimate of the age); and
  (5) Results of a leak test, internal inspection, or other tank integrity examination such that:
    (i) For non-enterable underground tanks, the assessment must include a leak test that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets, and high water table effects; and
    (ii) For other than non-enterable underground tanks and for ancillary equipment, this assessment must include either a leak test, as described above, or other integrity examination, that is certified by an independent, qualified, registered professional engineer in accordance with 270.11(d), that address cracks, leaks, corrosion, and erosion.

[Note: The practices described in the American Petroleum Institute [API] Publication, Guide for Inspection of Refinery Equipment, Chapter XIII, "Atmospheric and low Pressure Storage Tanks," 4th edition, 1981, may be used, where applicable, as guidelines in conducting other than a leak test.]

(c) Tank systems that store or treat materials that become hazardous wastes subsequent to July 14, 1986, must conduct this assessment within 12 months after the date that the waste becomes a hazardous waste.

(d) If, as a result of the assessment conducted in accordance with paragraph (a), a tank system is found to be leaking or unfit for use, the owner or operator must comply with the requirements of 264.196. [Approved by the Office of Management and Budget under control number 2050-0050.]

264.192 Design and installation of new tank systems or components.

(a) Owners or operators of new tank systems or components must obtain and submit to the Regional Administrator, at time of submittal of Part B information, a written assessment, reviewed and certified by an independent, qualified registered professional engineer, in accordance with 270.11(d), attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The assessment must show that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection to ensure that it will not collapse, rupture, or fail. This assessment, which will be used by the Regional Administrator to review and approve or disapprove the acceptability of the tank system design, must include, at a minimum, the following information:
  (1) Design standard(s) according to which tank(s) and/or the ancillary equipment are constructed;
  (2) Hazardous characteristics of the waste(s) to be handled;
  (3) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system will be in contact with the soil or with water, a determination by a corrosion expert of:
    (i) Factors affecting the potential for corrosion including but not limited to:
      (A) Soil moisture content;
      (B) Soil pH;
      (C) Soil sulfides level;
      (D) Soil resistivity;
      (E) Structure to soil potential;
      (F) Influence of nearby underground metal structures (e.g., piping);
      (G) Stray electric current; and
      (H) Existing corrosion-protection measures (e.g., coating, cathodic protection); and
    (ii) The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component consisting of one or more of the following:
      (A) Corrosion-resistant materials of construction such as special alloys, fiberglass reinforced plastic;
      (B) Corrosion-resistant coating (such as epoxy, fiberglass) with cathodic protection (e.g., impressed current or sacrificial anodes); and
      (C) Electrical isolation devices such as insulating joints and flanges.

[Note: The practices described in the National Association of Corrosion Engineers (NACE) standard, "Recommended Practice (RP-02-85)--Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and the American Petroleum Institute (API) Publication 1632, "Cathodic Protection of Underground petroleum Storage Tanks and Piping Systems," may be used, where applicable, as guidelines in providing corrosion protection for tank systems.]

  (4) For underground tank system components that are likely to be adversely affected by vehicular traffic a determination of design or operational measures that will protect the tank system against potential damage; and
  (5) Design considerations to ensure that:
    (i) Tank foundations will maintain the load of a full tank;
    (ii) Tank systems will be anchored to prevent flotation or dislodgement where the tank system is placed in a saturated zone, or is located within a seismic fault zone subject to the standards of 264.18(a); and
    (iii) Tank systems will withstand the effects of frost heave.

(b) The owner or operator of a new tank system must insure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Prior to covering enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or an independent, qualified, registered professional engineer, either of whom is trained and experienced in the proper installation of tank systems or components, must inspect the system for the presence of any of the following items:
  (1) Weld breaks;

(2) Punctures;
(3) Scrapes of protective coatings;
(4) Cracks;
(5) Corrosion;
(6) Other structural damage or inadequate construction/installation.

All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.

(c) New tank systems or components that are placed underground and that are backfilled must be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully uniformly supported.

(d) All new tanks equipment must be tested and ancillary equipment must be tested for tightness prior to being covered, enclosed, or placed in use. If a tank system is found not to be tight, all repairs necessary to remedy the leak(s) in the system must be performed prior to the tank system being covered, enclosed, or placed into use.

(e) Ancillary equipment must be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.

[Note: The piping system installation procedures described in American Petroleum Institute (API) Publication 1615 (November, 1979), "Installation of Underground Petroleum Storage Systems," or ANSI Standard B31.3, "Petroleum Refinery Piping," and ANSI Standard B31.4, "Liquid Petroleum Transportation Piping System," may be used, where applicable, as guidelines for proper installation of piping systems.]

(f) The owner or operator must provide the type and degree of corrosion protection recommended by an independent corrosion expert, based on the information provided under paragraph (a)(3) of this section, or other corrosion protection if the Regional Administrator believes other corrosion protection is necessary to ensure the integrity of the tank system during use of the tank system. The installation of a corrosion protection system that is field fabricated must be supervised by an independent corrosion expert to ensure proper installation.

(g) The owner or operator must obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of paragraphs (b) through (f) of this section, that attest that the tank system was properly designed and installed and that repairs, pursuant to paragraphs (b) and (d) of this section, were performed. These written statements must also include the certification statement as required in 270.11(d) of this chapter.

264.193 Containment and detection of releases.

(a) In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this section must be provided (except as provided in paragraphs (f) and (g) of this section):
(1) For all new tank systems or components, prior to their being put into service;
(2) For all existing tank systems used to store or treat EPA Hazardous Waste Nos. FO20, FO21, FO22, FO23, FO26, and FO27, within two years after January 12, 1987;
(3) For those existing tank systems of known and documented age, within two years after January 12, 1987 or when the tank system has reached 15 years of age, whichever comes later;
(4) For those existing tank systems for which the age cannot be documented, within eight years of January 12, 1987; but if the age of the facility is greater than seven years, secondary containment must be provided by the time the facility reaches 15 years of age, or within two years of January 12, 1987, whichever comes later; and
(5) For tank systems that store or treat materials that become hazardous wastes subsequent to January 12, 1987, within the time intervals required in paragraphs (a)(1) through (a)(4) of this section, except that the date that a material becomes a hazardous waste must be used in place of January 12, 1987.

(b) Secondary containment systems must be:
(1) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and
(2) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

(c) To meet the requirements of paragraph (b) of this section, secondary containment systems must be at a minimum:
(1) Constructed of or lined with materials that are compatible with the waste(s) to be placed in the tank system and must have sufficient strength and thickness to prevent failure owing to pressure gradients (including static head and external hydrological forces), physical contact with the waste to which it is exposed, climatic conditions, and the stress of daily operation (including stress from nearby vehicular traffic.

(2) Placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression, or uplift;

(3) Provided with a leak-detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours, or at the earliest practicable time if the owner or operator can demonstrate to the Regional Administrator that existing detection technologies or site conditions will not allow detection of a release within 24 hours; and

(4) Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills or precipitation. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human health and the environment, if the owner or operator can demonstrate to the Regional Administrator that removal of the released waste or accumulated precipitation cannot be accomplished within 24 hours.

[Note: If the collected material is a hazardous waste under Part 261 of this chapter, it is subject to management as a hazardous waste in accordance with all applicable requirements of Parts 262 through 265 of this chapter. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of Sections 301, 304, and 402 of the Clean Water Act, as amended. If discharged to a Publicly Owned Treatment Works (POTW), it is subject to the requirements of Section 207 of the Clean Water Act, as amended. If the collected material is released to the environment, it may be subject to the reporting requirements of 40 CFR Part 302.]

(d) Secondary containment for tanks must include one or more of the following devices:
(1) A liner (external to the tank);
(2) A vault;
(3) A double-walled tank; or
(4) An equivalent device as approved by the Regional Administrator.

(e) In addition to the requirements of paragraphs (b), (c), and (d) of this section, secondary containment systems must satisfy the following requirements:
(1) External liner systems must be:
(i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;
(ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient excess capacity to contain precipitation from a 25-year, 24-hour rainfall event.
(iii) Free of cracks or gaps; and
(iv) Designed to installed to surround the tank completely and to cover all surrounding earth likely to come into contact with the waste if the waste is released from the tank(s) [e.g., capable of preventing lateral as well as vertical migration of the waste].
(2) Vault systems must be:
(i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;
(ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25-year, 24-hour rainfall event;
(iii) Constructed with chemical-resistant water stops in place at all joints (if any):
(iv) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete.
(v) Provided with a means to protect against the formation of an ignition of vapors within the vault, if the waste being stored or treated:
(A) Meets the definition of ignitable waste under 162.21 of this chapter; or
(B) Meets the definition of reactive waste under 262.21 of this chapter, and may form an ignitable or explosive vapor.
(vi) Provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.
(3) Double-walled tanks must be:
(i) Designed as an integral structure (i.e., an inner tank completely enveloped within an outer shell so that any release from the inner tank is contained by the outer shell.
(ii) Protected, if constructed of metal, from both corrosion of the primary tank interior and of the external surface of the outer shell; and
(iii) Provided with a built-in continuous leak detection system capable of detecting a release within 24 hours, or at the earliest practicable time, if the owner or operator can demonstrate to the Regional

Administrator, and the Regional Administrator concludes, that the existing detection technology or site conditions would not allow detection of a release within 24 hours.

[Note: The provisions outlined in the Steel Tank Institute's (STI) "Standards for Dual Wall Underground Steel Storage Tanks" may be used as guidelines for aspects of the design of underground steel double-walled tanks.]

(f) Ancillary equipment must be provided with secondary containment (e.g., trench, jacketing, double-walled piping] that meets the requirements of paragraphs (b) and (c) of this section except for:
  (1) Aboveground piping (exclusive of flanges, joints, valves, and other connections) that are visually inspected for leaks on a daily basis;
  (2) Welded flanges, welded joints, and welded connections, that are visually inspected for leaks on a daily basis;
  (3) Sealless or magnetic coupling pumps and sealless valves, that are visually inspected for leaks on a daily basis; and
  (4) Pressurized aboveground piping systems with automatic shut-off devices (e.g., excess flow check valves, flow metering shutdown devices, loss of pressure actuated shut-off devices) that are visually inspected for leaks on a daily basis.

(g) The owner or operator may obtain a variance from the requirements of this section if the Regional Administrator finds, as a result of a demonstration by the owner or operator: that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous waste or hazardous constituents into the groundwater or surface water, at least as effectively as secondary containment during the active life of the tank system, or that in the event of a release that does migrate to groundwater or surface water, no substantial present or potential hazard will be posed to human health or the environment. New underground tank systems may not, per a demonstration in accordance with paragraph (g)(2) of this section, be exempted from the secondary containment requirements of this section.
  (1) In deciding whether to grant a variance based on a demonstration of equivalent protection of groundwater and surface water, the Regional Administrator will consider:
    (i) The nature and quantity of the wastes;
    (ii) The proposed alternate design and operation;
    (iii) The hydrogeologic setting of the facility, including the thickness of soils present between the tank system and groundwater; and
    (iv) All other factors that would influence the quality and mobility of the hazardous constituents and the potential for them to migrate to groundwater or surface water.
  (2) In deciding whether to grant a variance based on a demonstration of no substantial present or potential hazard, the Regional Administrator will consider:
    (i) The potential adverse effects on groundwater, surface water, and land quality taking into account:
      (A) The physical and chemical characteristics of the waste in the tank system, including its potential for migration;
      (B) The hydrogeological characteristics of the facility and surrounding land;
      (C) The potential for health risks caused by human exposure to waste constituents;
      (D) The potential for damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and
      (E) The persistence and permanence of the potential adverse effects;
    (ii) The potential adverse effects of a release on groundwater quality, taking into account:
      (A) The quantity and quality of groundwater and the direction of groundwater flow;
      (B) The proximity and withdrawal rates of groundwater users;
      (C) The current and future uses of groundwater in the area; and
      (D) The existing quality of groundwater, including other sources of contamination and their cumulative impact on the groundwater quality;
    (iii) The potential adverse effects of a release on surface water quality, taking into account:
      (A) The quantity and quality of groundwater and the direction of groundwater flow;
      (B) The patterns of rainfall in the region;
      (C) The proximity of the tank system to surface waters;
      (D) The current and future uses of surface waters in the area and any water quality standards established for those surface waters; and
      (E) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface water quality; and
    (iv) The potential adverse effects of a release on the land surrounding the tank system, taking into account:
      (A) The patterns of rainfall in the region; and
      (B) The current and future uses of the surround land

(3) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with the requirements of paragraph (g)(1) of his section, at which a release of hazardous waste has occurred from the primary tank system but has not migrated beyond the zone of engineering control (as established in the variance), must:
  (i) Comply with the requirements of 264.195, except paragraph (d); and
  (ii) Decontaminate or remove contaminated soil to the extent necessary to:
    (A) Enable the tank system for which the variance was granted to resume operation with the capability for the detection of releases at least equivalent to the capability it had prior to the release; and
    (B) Prevent the migration of hazardous waste or hazardous constituents to groundwater or surface water; and
  (iii) If contaminated soil cannot be removed or decontaminated in accordance with paragraph (g)(3)(ii) of this section, comply with the requirement of 264.197(b).

(4) The owner or operator of a tank system for which a variance from secondary containment had been granted in accordance with the requirements of paragraph (g)(1) of this section, at which a release of hazardous waste has occurred from the primary tank system and has migrated beyond the zone of engineering control (as established in the variance), must:
  (i) Comply with the requirements of 264.196(a), (b), (c), and (d); and
  (ii) Prevent the migration of hazardous waste or hazardous constituents to groundwater or surface water, if possible, and decontaminate or remove contaminated soil. If contaminated soil cannot be decontaminated or removed or if groundwater has been contaminated, the owner or operator must comply with the requirements of 264.197(b); and
  (iii) If repairing, replacing, or reinstalling the tank system, provide secondary containment in accordance with the requirements of paragraphs (a) through (f) of this section or reapply for a variance from secondary containment and meet the requirements for new tank systems in 264.192 if the tank system is replaced. The owner or operator must comply with these requirements even if contaminated soil can be decontaminated or removed and groundwater or surface water has not been contaminated.

(h) The following procedures must be followed in order to request a variance from secondary containment:
(1) The Regional Administrator must be notified in writing by the owner or operator that he intends to conduct and submit a demonstration for a variance from secondary containment as allowed in paragraph (g) according to the following schedule:
  (i) For existing tank systems, at least 24 months prior to the date that secondary containment must be provided in accordance with paragraph (a) of this section.
  (ii) For new tank systems, at least 30 days prior to entering into a contract for installation.

(2) As part of the notification, the owner or operator must also submit to the Regional Administrator a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. the demonstration must address each of the factors listed in paragraph (g)(1) or paragraph (g)(2) of this section;

(3) The demonstration for a variance must be completed within 180 days after notifying the Regional Administrator of an intent to conduct the demonstration; and

(4) If a variance is granted under this paragraph, the Regional Administrator will require the permittee to construct and operate the tank system in the manner that was demonstrated to meet the requirements for the variance.
  (i) All tank systems, until such time as secondary containment that meets the requirements of this section is provided, must comply with the following:
    (1) For non-enterable underground tanks, a leak test that meets the requirements of 264.191(b)(5) or other tank integrity method, as approved or required by the Regional Administrator, must be conducted at least annually;
    (2) For other than non-enterable underground tanks, the owner or operator must either (i) conduct a leak test as in paragraph (i)(1) of this section or develop a schedule and procedure for an assessment of the overall condition of the tank system by an independent, qualified registered professional engineer. The schedule and procedure must be adequate to detect obvious cracks, leaks, and corrosion or erosion that may lead to cracks and leaks. The owner or operator must remove the stored waste from the tank, if necessary, to allow the condition of all internal tank surfaces to be assessed. The frequency of these assessments must be based on the material of construction of the tank and its ancillary equipment, the age of the system, the type of corrosion or erosion protection used, the rate of corrosion or erosion observed during the previous inspection, and the characteristics of the waste being stored or treated.

(3) For ancillary equipment, a leak test or other integrity assessment as approved by the Regional Administrator must be conducted at least annually;

[Note: The practices described in the American Petroleum Institute (API) Publication Guide for Inspection of Refinery Equipment, Chapter XIII, "Atmospheric and Low-pressure Storage Tanks," 4th edition, 1981, may be used, where applicable, as guidelines for assessing the overall condition of the tank system].

(4) The owner or operator must maintain on file at the facility a record of the results of the assessments conducted in accordance with paragraphs (i)(1) through (i)(3) of this section;
(5) If a tank system or component is found to be leaking or unfit for use as a result of the leak test or assessment in paragraphs (i)(1) through (i)(3) of this section, the owner or operator must comply with the requirements of 264.196.

264.194 General Operating Requirements.

(a) Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.
(b) The owner or operator must use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include at a minimum:
  (1) Spill prevention controls (e.g., check valves, dry disconnect couplings);
  (2) Overfill prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank); and
  (3) Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.
(c) The owner or operator must comply with the requirements of Section 264.196 if a leak or spill occurs in the tank system.

264.195 Inspections.

(a) The owner or operator must develop and follow a schedule and procedure for inspecting overfill controls.
(b) The owner or operator must inspect at least once each operating day:
  (1) Aboveground portions of the tank system, if any, to detect corrosion or releases of waste;
  (2) Data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and
  (3) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g., dikes) to detect erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

[Note: Section 264.15(c) requires the owner or operator to remedy any deterioration or malfunction he finds. Section 264.196 requires the owner or operator to notify the Regional Administrator within 24 hours of confirming a leak. Also, 40 CFR Part 302 may require the owner or operator to notify the National Response Center of a release.]

(c) The owner or operator must inspect cathodic protection systems, if present, according to, at minimum, the following schedule to ensure that they are functioning properly:
  (1) The proper operation of the cathodic protection system must be confirmed within six months after initial installation and annually thereafter; and
  (2) All sources of impressed current must be inspected and/or tested, as appropriate, at least bimonthly (i.e., every other month).

[Note: The practices described in the National Association of Corrosion Engineers (NACE) standard, "Recommended Practice (RP-02-85)–Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and the American Petroleum Institute (API) Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems," may be used, where applicable, as guidelines in maintaining and inspecting cathodic protection systems.]

(d) The owner or operator must document in the operating record of the facility an inspection of those items in paragraphs (a) through (c) of this section.

264.196 Response to leaks or spills and disposition of leaking or unfit-for-use tank systems.

A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately, and the owner or operator must satisfy the following requirements:

(a) Cessation of Use; prevent flow or addition of wastes. The owner or operator must immediately stop the flow of hazardous waste into the tank system of secondary containment system and inspect the system to determine the cause of the release.

(b) Removal of waste from tank system or secondary containment system.
  (1) If the release was from the tank system, the owner/operator must, within 24 hours after detection of the leak or, if the owner/operator demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.
  (2) If the material released was to a secondary containment system, all released materials must be removed within 24 hours or in as timely a manner as is possible to prevent harm to human health and the environment.

(c) Containment of visible releases to the environment. The owner/operator must immediately conduct a visual inspection of the release and, based upon that inspection:
  (1) Prevent further migration of the leak or spill to soils or surface water; and
  (2) Remove, and properly dispose of, any visible contamination of the soil or surface water.

(d) Notifications, reports.
  (1) Any release to the environment, except as provided in paragraph (d)(2) of this section, must be reported to the Regional Administrator within 24 hours of its detection. If the release has been reported pursuant to 40 CFR Part 302, that report will satisfy this requirement.
  (2) A leak or spill of hazardous waste is exempted from the requirements of this paragraph if it is:
    (i) Less than or equal to a quantity of one (1) pound; and
    (ii) Immediately contained and cleaned up.
  (3) Within 30 days of detection of a release to the environment, a report containing the following information must be submitted to the Regional Administrator:
    (i) Likely route of migration of the release;
    (ii) Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);
    (iii) Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within 30 days, these data must be submitted to the Regional Administrator as soon as they become available.
    (iv) Proximity to downgradient drinking water, surface water, and populated areas; and
    (v) Description of response actions taken or planned.

(e) Provision of secondary containment, repair, or closure.
  (1) Unless the owner/operator satisfies the requirements of paragraphs (e)(2) through (4) of this section, the tank system must be closed in accordance with Section 264.197.
  (2) If the cause of the release was a spill that has not damaged the integrity of the system, the owner/operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.
  (3) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service.
  (4) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the owner/operator must provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of Section 264.193 before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of paragraph (f) of this section are satisfied. If a component is replaced to comply with the requirement of this subparagraph, that component must satisfy the requirements for new tank systems or components in Sections 264.192 and 264.193. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection (e.g., the bottom of an inground or onground tank), the entire component must be provided with secondary containment in accordance with Section 264.193 prior to being returned to use.

(f) Certification of major repairs. If the owner/operator has repaired a tank system in accordance with paragraph (e) of this section, and the repair has been extensive (e.g., installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service unless the owner/operator has obtained a certification by an independent, qualified, registered, professional engineer in accordance with Section 270.11(d) that the repaired system is capable of handling hazardous wastes without

release for the intended life of the system. This certification must be submitted to the Regional Administrator within seven days after returning the tank system to use.

Note: The Regional Administrator may, on the basis of any information received that there is or has been a release of hazardous waste or hazardous constituents into the environment, issue an order under RCRA sections 3004(v), 3008(h), or 7003(a) requiring corrective action or such other response as deemed necessary to protect human health or the environment.]

[Note: See Section 264.15(c) for the requirements necessary to remedy a failure. Also, 40 CFR Part 302 may require the owner or operator to notify the National Response Center of certain releases.]

264.197 Closure and post-closure care.

(a) At closure of a tank system, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste, unless Section 261.3(d) of this chapter applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all of the requirements specified in Subparts G and H of this part.

(b) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in paragraph (a) of this section, then the owner or operator must close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills (Section 264.310). In addition, for the purpose of closure, post-closure, and financial responsibility, such a tank system is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in subparts G and H of this part.

(c) If an owner or operator has a tank system that does not have secondary containment that meets the requirements of Section 264.193 (b) through (f) and has not been granted a variance from the secondary containment requirements in accordance with Section 264.193(g), then:
   (1) The closure plan for the tank system must include both a plan for complying with paragraph (a) of this section and a contingent plan for complying with paragraph (b) of this section.
   (2) A contingent post-closure plan for complying with paragraph (b) of this section must be prepared and submitted as part of the permit application.
   (3) The cost estimates calculated for closure and post-closure care must reflect the costs of complying with the contingent closure plan and the contingent post-closure plan, if those costs are greater than the costs of complying with the closure plan prepared for the expected closure plan prepared for the expected closure under paragraph (a) of this section.
   (4) Financial assurance must be based on the cost estimates in paragraph (c)(3) of this section.
   (5) For the purposes of the contingent closure and post-closure plans, such a tank system is considered to be a landfill, and the contingent plans must meet all of the closure, post-closure, and financial responsibility requirements for landfills under Subparts G and H of this part.

264.198 Special requirements for ignitable or reactive wastes.

(a) Ignitable or reactive waste must not be placed in tank systems, unless:
   (1) The waste is treated, rendered, or mixed before or immediately after placement in the tank system so that:
      (i) The resulting waste, mixture. or dissolved material no longer meets the definition of ignitable or reactive waste under Sections 261.21 or 261.23 of this chapter; and
      (ii) Section 264.17(b) is complied with; or
   (2) The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or
   (3) The tank system is used solely for emergencies.

(b) The owner or operator of a facility where ignitable or reactive waste is stored or treated in a tank must comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code," (1977 or 1981) (incorporated by reference, see Section 260.11).

264.199 Special requirement for incompatible wastes.

(a) Incompatible wastes, or incompatible wastes and materials, must not be placed in the same tank system, unless Section 264.17(b) is complied with.
(b) Hazardous waste must not be placed in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless Section 264.17(b) is complied with.

264.200 Air emission standards.

The owner or operator shall manage all hazardous waste placed in a tank in accordance with the applicable requirements of subparts AA, BB, and CC of this part.

(l) The following are requirements for Surface Impoundments:

(1) 40 CFR 264.220 through 264.232 (Subpart K), "Surface Impoundments", are incorporated by reference including subsequent amendments and editions.

(2) The following are additional standards for surface impoundments:

(A) The liner system shall consist of at least two liners;
(B) Artificial liners shall be equal to or greater than 30 mils in thickness;
(C) Clayey liners shall be equal to or greater than five feet in thickness and have a maximum permeability of 1.0 x 10-7 cm/sec;
(D) Clayey liner soils shall have the same characteristics as described in (r)(4)(B)(ii), (iii), (iv), (vi) and (vii) of this Rule;
(E) A leachate collection system shall be constructed between the upper liner and the bottom liner;
(F) A leachate detection system shall be constructed below the bottom liner; and
(G) Surface impoundments shall be constructed in such a manner to prevent landsliding, slippage or slumping.

SUBPART K - SURFACE IMPOUNDMENTS

264.220 Applicability.

The regulations in this subpart apply to owners and operators of facilities that use surface impoundments to treat, store, or dispose of hazardous waste, except as Section 264.1 provides otherwise.

264.221 Design and operating requirements.

(a) any surface impoundment that is not covered by paragraph (c) of this section or Section 265.221 of this chapter must have a liner for all portions of the impoundment (except for existing portions of such impoundments). The liner must be designed, constructed, and installed to prevent any migration of wastes out of the impoundment of the adjacent subsurface soil or groundwater or surface water at any time during the active life (including the closure period) of the impoundment. The liner may be constructed of materials that may allow wastes to migrate into the liner (but not into the adjacent subsurface soil or groundwater or surface water) during the active life of the facility, provided that the impoundment is closed in accordance with Section 264.228(a)(1). For impoundments that will be closed in accordance with Section 264.228(a)(2), the liner must be constructed of materials that can prevent wastes from migrating into the liner during the active life of the facility. The liner must be:
  (1) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;
  (2) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and
  (3) Installed to cover all surrounding earth likely to be in contact with the waste or leachate.
(b) The owner or operator will be exempted from the requirements of paragraph (a) of this section if the Regional Administrator find, based on a demonstration by the owner or operator, that alternate design and operating practices, together with location characteristics, will prevent the migration hazardous constituents (see Section 264.93) into the groundwater or surface water at any future time. In deciding whether to grant an exemption, the Regional Administrator will consider:

(1) The nature and quantity of the wastes;
(2) The proposed alternate design and operation;
(3) The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the impoundment and ground water or surface water; and
(4) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.

(c) The owner or operator of each new surface impoundment unit on which construction commences after January 29, 1992, each lateral expansion of a surface impoundment unit on which construction commences after July 29, 1992, and each replacement of an existing surface impoundment unit that is to commence reuse after July 29, 1992, must install two or more liners and a leachate collection and removal system between such liners. "Construction commences" is as defined in Section 260.10 of this chapter under "existing facility".

(1) (i) The liner system must include:
(A) A top liner designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period; and
(B) A composite bottom liner, consisting of at least two components. The upper component must be designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into this component during the active life and post-closure care period. The lower component must be designed and constructed of materials to minimize the migration of hazardous constituents constituents if a breach in the upper component were to occur. The lower component must be constructed of at least 3 feet (91 cm) of compacted soil material with a hydraulic conductivity of no more than 1 X 10^{-7}/cm/sec.

(ii) The liners must comply with paragraphs (a)(1),(2), and (3) of this section.

(2) The leachate collection and removal system between the liners, and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems, is also a leak detection system. This leak detection system must be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a leak detection system in this paragraph are satisfied by installation of a system that is, at a minimum:
(i) Constructed with a bottom slope of one percent or more;
(ii) Constructed of granular drainage materials with a hydraulic conductivity of 1 X 10^{-1}/cm/sec or more and a thickness of 12 inches (30.5 cm) or more; or constructed of synthetic or geonet drainage materials with a transmissivity of 3 X 10^{-4}/m^2sec or more;
(iii) Constructed of materials that are chemically resistant to the waste managed in the surface impoundment and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes and any waste cover materials or equipment used at the surface impoundment;
(iv) Designed and operated to minimize clogging during the active life and post-closure care period; and
(v) Constructed with sumps and liquid removal methods (e.g., pumps) of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit must have its own sump(s). The design of each sump and removal system must provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

(3) The owner or operator shall collect and remove pumpable liquids in the sumps to minimize the head on the bottom liner.

(4) The owner or operator of a leak detection system that is not located completely above the seasonal high water table must demonstrate that the operation of the leak detection system will not be adversely affected by the presence of ground water.

(d) The Regional Administrator may approve alternative design or operating practices to those specified in paragraph (c) of this section if the owner or operator demonstrates to the Regional Administrator that such design and operating practices, together with location characteristics:
(1) Will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as the liners and leachate collection and removal system specified in paragraph (c) of this section; and
(2) Will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

(e) The double liner requirement set forth in paragraph (c) of this section may be waived by the Regional Administrator for any monofill if:

(1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the EP toxicity characteristics in Section 261.24 of this chapter; and

(2) (i) (A) The monofill has at least one liner for which there is no evidence that such liner is leaking. For the purposes of this paragraph, the term "liner" means a liner designed, constructed, installed, and operated to prevent hazardous waste from passing into the liner at any time during the active life of the facility, or a liner designed, constructed, installed, and operated to prevent hazardous waste from migrating beyond the liner to adjacent subsurface soil, ground water, or surface water at any time during the active life of the facility. In the case of any surface impoundment which has been exempted from the requirements of paragraph (c) of this section on the basis of a liner designed, constructed, installed,and operated to prevent hazardous waste from passing beyond the liner, at the closure of such impoundment, the owner or operator must remove or decontaminate all waste residues, all contaminated liner material, and contaminated soil to the extent practicable. If all contaminated soil is not removed or decontaminated, the owner or operator of such impoundment will comply with appropriate post-closure requirements, including but not limited to groundwater monitoring and corrective action;

(B) The monofill is located more than one-quarter mile from an underground source of drinking water (as that term is defined in Section 144.3 of this chapter); and

(C) The monofill is in compliance with generally applicable groundwater monitoring requirements for facilities with permits under RCRA Section 3005(c); or

(ii) The owner or operator demonstrates that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into groundwater or surface water any future time.

(f) The owner or operator of any replacement surface impooundment unit is exempt from paragraph (c) of this section if:

(1) The existing unit was constructed in compliance with the design standards of sections 3004 (o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act; and

(2) There is no reason to believe that the liner is not functioning as designed.

(g) A surface impoundment must be designed, constructed, maintained, and operated to prevent overtopping resulting from normal or abnormal operations; overfilling; wind and wave action; rainfall; run-on, malfunction of level controllers, alarms, and other equipment; and human error;

(h) A surface impoundment must have dikes that are designed, constructed, and maintained with sufficient structural integrity to prevent massive failure of the dikes. In ensuring structural integrity, it must not be presumed that the liner system will function without leakage during the active life of the unit.

(i) The Regional Administrator will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

264.222 Action Leakage Rate

(a) The Regional Administrator shall approve an action leakage rate for surface impoundment units subject to Section 264.221 (c) or (d). The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging rib, layover and creep of synthetic components of the system, overburden pressures, etc.).

(b) To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly or monthly flow rate from the monitoring data obtained under Section 264.226(d) to an average daily flow rate (gallons per acre per day) for each sump. Unless the Regional Administrator approves a different calculation, the average daily flow rate for each sump must be calculated weeky during the active life and closure period, and if the unit is closed in accordance with Section 264.228(b), monthly during the post-closure care period when monthly monitoring is required under Section 264.226(d).

264.223 Response Actions.

(a) The owner or operator of surface impoundment units subject to Section 264.221 (c) of (d) must have an approved response action plan before receipt of waste. The response action plan must set forth the actions to be taken if the

action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in paragraph (b) of this section.

(b) If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:
  (1) Notify the Regional Administrator in writing of the exceedence within seven days of the determination;
  (2) Submit a preliminary written assessment to the Regional Administrator within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;
  (3) Determine to the extent practicable the location, size, and cause of any leak;
  (4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;
  (5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and
  (6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Regional Administrator the results of the analyses specified in paragraphs (b) (3), (4), and (5) of this section, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the Regional Administrator a report summarizing the results of any remedial actions taken and actions planned.

(c) To make the leak and/or remediation determinations in paragraphs (b) (3), (4), and (5) of this section, the owner or operator must:
  (1) (i) Assess the source of liquids and amounts of liquids by source,
  (ii) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and
  (iii) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or
  (2) Document why such assessments are not needed.

264.225 [Reserved]

264.226 Monitoring and inspection.

(a) During construction and installation, liners (except in the case of existing portions of surface impoundments exempt from Section 264.221(a) and cover systems (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections (e.g., holes, cracks, thin spots, or foreign materials). Immediately after construction or installation:
  (1) Synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and
  (2) Soil-based and admixed liners and covers must be inspected for imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

(b) While a surface impoundment is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:
  (1) Deterioration, malfunctions, or improper operation of overtopping control systems;
  (2) Sudden drops in the level of the impoundment's contents; and
  (3) Severe erosion or other signs of deterioration in dikes or other containment devices.

(c) Prior to the issuance of a permit, and after any extended period of time (at least six months) during which the impoundment was not in service, the owner or operator must obtain a certification from a qualified engineer that the impoundment's dike, including that portion of any dike which provides freeboard, has structural integrity. The certification must establish in particular, that the dike:
  (1) Will withstand the stress of the pressure exerted by the types and amounts of wastes to be placed in the impoundment; and
  (2) Will not fail due to scouring or piping, with dependence on any liner system included in the surface impoundment construction.

(d) (1) An owner or operator required to have a leak detection system under Section 264.221 (c) or (d) must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.
  (2) After the final cover is installed, the amount of liquids removed from each leak detection system sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of

liquids in the sumps must be recorded at least semi-annually. If at any time during the post-closure care period the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator must return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

(3) "Pump operating level" is a liquid level proposed by the owner or operator and approved by the Regional "Administrator based on pump activation level, sump dimensions, and level that avoids backup into the drainage layer and minimizes head in the sump.

264.227 Emergency repairs; contingency plans.

(a) A surface impoundment must be removed from service in accordance with paragraph (b) of this section when:
  (1) The level of liquids in the impoundment suddenly drops and the drop is not known to be caused by changes in the flows into or out of the impoundment; or
  (2) The dike leaks.

(b) When a surface impoundment must be removed from service as required by paragraph (a) of this surface, the owner or operator must:
  (1) Immediately shut off the flow or stop the addition of wastes into the impoundment;
  (2) Immediately contain any surface leakage which has occurred or is occurring;
  (3) Immediately stop the leak;
  (4) Take any other necessary steps to top or prevent catastrophic failure;
  (5) If a leak cannot be stopped by any other means, empty the impoundment; and
  (6) Notify the Regional Administrator of the problem in writing within seven days after detecting the problem.

(c) As part of the contingency plan required in Subpart D of this part, the owner or operator must specify a procedure for complying with the requirements of paragraph (b) of this section.

(d) No surface impoundment that has been removed from service in accordance with the requirements of this section may be restored to service unless the portion of the impoundment which was failing is repaired and the following steps are taken:
  (1) If the impoundment was removed from service as the result of actual or imminent dike failure, the dike's structural integrity must be recertified in accordance with Section 264.226(c).
  (2) If the impoundment was removed from service as the result of a sudden drop in the liquid level, then:
    (i) For any existing portion of the impoundment, a liner must be installed in compliance with Section 264.221(a); and
    (ii) For any other portion of the impoundment, the repaired liner system must be certified by a qualified engineer as meeting the design specifications approved in the permit.

(e) A surface impoundment that has been removed from service in accordance with the requirements of this section and that is not being repaired must be closed in accordance with the provisions of Section 264.228.

264.228 Closure and post-closure care.

(a) At closure, the owner or operator must:
  (1) Remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless Section 261.3(d) of this chapter applies; or
  (2) (i) Eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues;
    (ii) Stabilize remaining wastes to a bearing capacity sufficient to support final cover; and
    (iii) Cover the surface impoundment with a final cover designed and constructed to:
      (A) Provide long-term minimization of the migration of liquids through the closed impoundment;
      (B) Function with minimum maintenance;
      (C) Promote drainage and minimize erosion or abrasion of the final cover;
      (D) Accommodate settling and subsidence so that the cover's integrity is maintained; and
      (E) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

(b) If some waste residues or contaminated materials are left in place at final closure, the owner or operator must comply with all post-closure requirements contained in Section 264.117-264.120, including maintenance and monitoring throughout the post-closure care period (specified in the permit under Section 264.117). The owner or operator must:
  (1) Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;

(2) Maintain and monitor the leak detection system in accordance with Sections 264.221(c)(2)(iv) and (3) and 264.226(d), and comply with all other applicable leak detection system requirements of this part;
(3) Maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of Subpart F of this part; and
(4) Prevent run-on and run-off from eroding or otherwise damaging the final cover.

(c) (1) If an owner or operator plans to close a surface impoundment in accordance with paragraph (a)(1) of this section, and the impoundment does not comply with the liner requirements of Section 264.221(a) and is not exempt from them in accordance with Section 264.221(b), then:
(i) The closure plan for the impoundment under Section 264.112 must include both a plan for complying with paragraph (a)(1) of this section and a contingent plan for complying with paragraph (a)(2) of this section in case not all contaminated subsoils can be practicably removed at closure; and
(ii) The owner or operator must prepare a contingent post-closure plan under Section 264.118 for complying with paragraph (b) of this section in case not all contaminated subsoils can be practicably removed at closure.
(2) The cost estimates calculated under Section 264.142 and Section 264.144 for closure and post-closure care of an impoundment subject to this paragraph must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under paragraph (a)(1) of this section.

264.229 Special requirements for ignitable or reactive waste.

Ignitable or reactive waste must not be placed in a surface impoundment, unless the waste and impoundment satisfy all applicable requirements of 40 CFR part 268, and:

(a) The waste is treated, rendered, or mixed before or immediately after placement in the impoundment so that:
(1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under Sections 261.21 or 261.23 of this chapter; and
(2) Section 264.17(b) is complied with; or
(b) 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; or
(c) The surface impoundment is used solely for emergencies.

264.230 Special requirements for incompatible wastes.

Incompatible wastes, or incompatible wastes and materials, (see Appendix V of this part for examples) must not be placed in the same surface impoundment unless Section 264.17(b) is complied with.

264.231 Special requirements for hazardous wastes FO20, FO21, FO22, FO23, FO26, and FO27.

(a) Hazardous wastes FO20, FO21, FO22, FO23, FO26, and FO27 must not be placed in a surface impoundment unless the owner or operator operates the surface impoundment in accordance with a management plan for these wastes that is approved by the Regional Administrator pursuant to the standards set out in this paragraph, and in accord with all other applicable requirements of this part. The factors to be considered are;
(1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;
(2) The attenuative properties of underlying and surrounding soils or other materials;
(3) The mobilizing properties of other materials co-disposed with these wastes; and
(4) The effectiveness of additional treatment, design, or monitoring techniques.
(b) The Regional Administrator may determine that additional design, operating, and monitoring requirements are necessary for surface impoundments managing hazardous wastes FO20, FO21, FO22, FO23, FO26, and FO27 in order to reduce the possibility of migration of these wastes to groundwater, surface water, or air, so as to protect human health and the environment.

264.232 Air emission standards.

The owner or operator shall manage all hazardous waste placed in a surface impoundment in accordance with the applicable requirements of subparts BB and CC of this part.

(m) 40 CFR 264.250 through 264.259 (Subpart L), "Waste Piles", are incorporated by reference including subsequent amendments and editions.

SUBPART L - WASTE PILES

264.250 Applicability.

(a) The regulations in this subpart apply to owners and operators of facilities that store or treat hazardous waste in piles, except as Section 264.1 provides otherwise.
(b) The regulations in this subpart do not apply to owners or operators of waste piles that are closed with wastes left in place. Such waste piles are subject to regulation under Subpart N of this part (Landfills).
(c) The owner or operator of any waste pile that is inside or under s structure that provides protection from precipitation so that neither run-off nor leachate is generated is not subject to regulation under Section 264.251 or under Subpart F of this part provided that:
    (1) Liquids or materials containing free liquids are not placed in the pile;
    (2) The pile is protected from surface water run-on by the structure or in some other manner;
    (3) The pile is designed and operated to control dispersal of the waste by wind, where necessary, by means other than wetting; and
    (4) The pile will not generate leachate through decomposition or other reactions.

264.251 Design and operating requirements.

(a) A waste pile (except for an existing portion of a waste pile) must have:
    (1) A liner that is designed, constructed, and installed to prevent any migration of wastes out of the pile into the adjacent subsurface soil or ground water or surface water at any time during the active life (including the closure period) of the waste pile. The liner may be constructed of materials that may allow waste to migrate into the liner itself (but not into the adjacent subsurface soil or groundwater or surface water) during the active life of the facility. The liner must be:
        (i) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;
        (ii) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and
        (iii) Installed to cover all surrounding earth likely to be in contact with the waste or leachate; and
    (2) A leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the pile. The Regional Administrator will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm (one foot). The leachate collection and removal system must be:
        (i) Constructed of materials that are:
            (A) Chemically resistant to the waste managed in the pile and the leachate expected to be generated; and
            (B) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying wastes, waste cover-materials, and by an equipment used at the pile; and
        (ii) Designed and operated to function without clogging through the scheduled closure of the waste pile.
(b) The owner or operator will be exempted from the requirements of paragraph (a) of this section if the Regional Administrator finds, based on a demonstration by the owner or operator, that alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see Section 264.93) into the groundwater or surface water at any future time. In deciding whether to grant an exemption, the Regional Administrator will consider:

(1) The nature and quantity of the wastes;
(2) The proposed alternate design and operation;
(3) The hydrogeologic setting of the facility, including attenuative capacity and thickness of the liners and soils present between the pile and groundwater or surface water; and
(4) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to groundwater or surface water.

(c) The owner or operator of each new waste pile unit on which construction commences after January 29, 1992, each lateral expansion of a waste pile unit on which construction commences after July 29, 1992, and each replacement of an existing waste pile unit that is to commence reuse after July 29, 1992, must install two or more liners and a leachate collection and removal system above and between such liners. "Construction commences" is as defined in Section 260.10 under "existing facility".

(1) (i) The liner system must include:

(A) A top liner designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period; and

(B) A composite bottom liner, consisting of at least two components. The upper component must be designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into this component during the active life and post-closure care period. The lower component must be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component must be constructed of at least 3 feet (91 cm) of compacted soil material with a hydraulic conductivity of no more than 1×10^{-7} cm/sec.

(ii) The liners must comply with paragraphs (a)(1)(i), (ii), and (iii) of this section.

(2) The leachate collection and removal system immediately above the top liner must be designed, constructed, operated, and maintained to collect and remove leachate from the waste pile during the active life and post-closure care period. The Regional Administrator will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm (one foot). The leachate collection and removal system must comply with paragraphs (c)(3)(iii) and (iv) of this section.

(3) The leachate collection and removal system between the liners, and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems, is also a leak detection system. The leak detection system must be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a leak detection system in this paragraph are satisfied by installation of a system that is, at a minimum:

(i) Constructed with a bottom slope of one percent or more;

(ii) Constructed of granular drainage materials with a hydraulic conductivity of 1×10^{-2} cm/sec or more and a thickness of 12 inches (30.5 cm) or more; or constructed of synthetic or geonet drainage materials with a transmissivity of $3 \times 10^{-5} m^2$/sec or more:

(iii) Constructed of materials that are chemically resistant to the waste managed in the waste pile and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and equipment used at the waste pile;

(iv) Designed and operated to minimize clogging during the active life and post-closure care period; and

(v) Constructed with sumps and liquid removal methods (e.g., pumps) of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit must have its own sump(s). The design of each sump and removal system must provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

(4) The owner or operator shall collect and remove pumpable liquids in the leak detection system sumps to minimize the head on the bottom liner.

(5) The owner or operator of a leak detection system that is not located completely above the seasonal high water table must demonstrate that the operation of the leak detection system will not be adversely affected by the presence of ground water.

(d) The Regional Administrator may approve alternative design or operating practices to those specified in paragraph (c) of this section if the owner or operator demonstrates to the Regional Administrator that such design and operating practices, together with location characteristics:

(1) Will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as the liners and leachate collection and removal systems specified in paragraph (c) of this section; and

(2) Will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

(e) Paragraph (c) of this section does not apply to monofills that are granted a waiver by the Regional Administrator in accordance with Section 264.221(e).

(f) The owner or operator of any replacement waste pile unit is exempt from paragraph (c) of this section if:
   (1) The existing unit was constructed in compliance with the design standards of section 3004(o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act; and
   (2) There is no reason to believe that the liner is not functioning as designed.

(g) The owner or 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.

(h) The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(i) Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

(j) If the pile contains any particular matter which may be subject to wind dispersal, the owner or operator must cover or otherwise manage the pile to control wind dispersal.

(k) The Regional Administrator will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

264.252 Action Leakage Rate.

(a) The Regional Administrator shall approve an action leakage rate for surface impoundment units subject to Section 264.251(c) or (d). The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope hydraulic conductivity, thickness of drainage material), construction operation, and location of the LDS waste and leachate characteristics likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging rib layover and creep of synthetic components of the system, overburden pressures, etc.).

(b) To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly flow rate from the monitoring data obtained under Section 264.254(c) to an average daily flow rate (gallons per acre per day) for each sump. Unless the Regional Administrator approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period.

264.253 Response Actions

(a) The owner or operator of waste pile units subject to Section 264.251 (c) or (d) must have an approved response action plan before receipt of waste. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in paragraph (b) of this section.

(b) If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:
   (1) Notify the Regional Administrator in writing of the exceedance within seven days of the determination:
   (2) Submit a preliminary written assessment to the Regional Administrator within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;
   (3) Determine to the extent practicable the location, size, and cause of any leak;
   (4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;
   (5) Determine any other short-term and long-term actions to be taken to mitigate or stop any leaks; and
   (6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Regional Administrator the results of the analyses specified in paragraphs (b) (3), (4), and (5) of this section, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the Regional Administrator a report summarizing the results of any remedial actions taken and actions planned.

(c) To make the leak and/or remediation determinations in paragraphs (b) (3), (4), and (5) of this section, the owner or operator must:
   (1) (i) Assess the source of liquids and amounts of liquids by source,

(ii) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquids; and

(iii) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or

(2) Document why such assessments are not needed.

264.254 Monitoring and Inspection.

(a) During construction or installation, liners (except in the case of existing portions of piles exempt from Section 264.251(a) and cover systems (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections (e.g., holes, cracks, think spots, or foreign materials). Immediately after construction or installation:

(1) Synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and

(2) Soil-based and admixed liners and covers must be inspected of imperfections including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

(b) While a waste pile is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

(1) Deterioration, malfunctions, or improper operation of run-on and run-off control systems;

(2) Proper functioning of wind dispersal control systems, where present; and

(3) The presence of leachate in and proper functioning of leachate collection and removal systems, where present.

(c) An owner or operator required to have a leak detection system under Section 264.251(c) must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

264.255 [Reserved]

264.256 Special requirements for ignitable or reactive waste.

Ignitable or reactive waste must not be placed in a waste pile unless the waste and waste pile satisfy all applicable requirements of 40 CFR part 268, and:

(a) The waste is treated, rendered, or mixed before or immediately after placement in the pile so that:

(1) The resulting waste, mixture, of dissolution of material no longer meets the definition of ignitable or reactive waste under Sections 261.21 or 261.23 of this chapter; and

(2) Section 264.17(b) is complied with; or

(b) 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.

264.257 Special requirements for incompatible wastes.

(a) Incompatible wastes, or incompatible wastes and materials (see Appendix V of this part for examples), must not be placed in the same pile, unless Section 264.17(b) is complied with.

(b) A pile of hazardous waste that is incompatible with any waste or other material stored nearby in containers, other piles, open tanks, or surface impoundments must be separated from the other materials, or protected from them by means of a dike, berm, wall, or other device.

(c) Hazardous waste must not be piled on the same base where incompatible wastes or materials were previously piled, unless the base has been decontaminated sufficiently to ensure compliance with Section 264.17(b).

264.258 Closure and post-closure care.

(a) At closure, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless Section 261.2(d) of this chapter applies.

(b) If after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in paragraph (a) of this section, the owner or operator finds that not all contaminated subsoils can be practicably removed or decontaminated, he must close the facility and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills (Section 264.310).

(c) (1) The owner or operator of a waste pile that does not comply with the liner requirements of Section 264.251(a)(1) and is not exempt from them in accordance with Section 264.250(c) or 264.251(b), must:

(i) Include in the closure plan for the pile under Section 264.112 both a plan for complying with paragraph (a) of this section and a contingent plan for complying with paragraph (b) of this section in case not all contaminated subsoils can be practicably removed at closure; and

(ii) Prepare a contingent post-closure plan under Section 264.118 for complying with paragraph (b) of this section in case not all contaminated subsoils can be practicably removed at closure.

(2) The cost estimates calculated under Section 264.142 and 264.144 for closure and post-closure care of a pile subject to this paragraph must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under paragraph (a) of this section.

264.259 Special requirements for hazardous wastes FO20, FO21, FO22, FO23, FO26, and FO27.

(a) Hazardous wastes FO20, FO21, FO22, FO23, FO26,and FO27 must not be placed in waste piles that are not enclosed (as defined in 264.250(c)) unless the owner or operator operates the waste pile in accordance with a management plan for these wastes that is approved by the Regional Administrator pursuant to the standards set out in this paragraph, and in accord with all other applicable requirements of this part. The factors to be considered are:

(1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

(2) The attenuative properties of underlying and surrounding soils or other materials;

(3) The mobilizing properties of other materials co-disposed with these wastes; and

(4) The effectiveness of additional treatment, design, or monitoring techniques.

(b) The Regional Administrator may determine that additional design, operating, and monitoring requirements are necessary for piles managing hazardous wastes.FO20, FO21, FO22, FO23, FO26, and FO27 in order to reduce the possibility of migration of these wastes to groundwater, surface water, or air so as to protect human health and the environment.

(n) 40 CFR 264.270 through 264.283 (Subpart M), "Land Treatment", are incorporated by including subsequent amendments and editions.

SUBPART M - LAND TREATMENT

264.270 Applicability.

The regulations in this subpart apply to owners and operators of facilities that treat or dispose of hazardous waste in land treatment units, except as Section 264.1 provides otherwise.

264.271 Treatment program.

(a) An owner or operator subject to this subpart must establish a land treatment program that is designed to ensure that hazardous constituents placed in or on the treatment zone are degraded, transformed, or immobilized within the treatment zone. The Regional Administrator will specify in the facility permit the elements of the treatment program, including:
  (1) The wastes that are capable of being treated at the unit based on a demonstration under Section 264.272;
  (2) Design measures and operating practices necessary to maximize the success of degradation, transformation, and immobilization processes in the treatment zone in accordance with Section 264.273(a); and
  (3) Unsaturated zone monitoring provisions meeting the requirements of Section 264.278.

(b) The Regional will specify in the facility permit the hazardous constituents that must be degraded, transformed, or immobilized under this subpart. Hazardous constituents are constituents identified in Appendix VIII of Part 261 of this chapter that are reasonably expected to be in, or derived from, waste placed in or on the treatment zone.

(c) The Regional Administrator will specify the vertical and horizontal dimensions of the treatment zone in the facility permit. The treatment zone is the portion of the unsaturated zone below and including the land surface in which the owner or operator intends to maintain the conditions necessary for effective degradation, transformation, or immobilization of hazardous constituents. The maximum depth of the treatment zone must be
  (1) No more than 1.5 meters (5 feet) from the initial soil surface; and
  (2) More than 1 meter (3 feet) above the seasonal high water table.

264.272 Treatment demonstration.

(a) For each waste that will be applied to the treatment zone, the owner or operator must demonstrate, prior to application of the waste, that hazardous constituents in the waste can be completely degraded, transformed, or immobilized in the treatment zone.

(b) In making this demonstration, the owner or operator may use field tests, laboratory analyses, available data, or, in the case of existing units, operating data. If the owner or operator intends to conduct field tests or laboratory analyses in order to make the demonstration required under paragraph (a) of this section, he must obtain a treatment or disposal permit under Section 270.63. The Regional Administrator will specify in this permit the testing, analytical design, and operating requirements (including the duration of the tests and analyses and, in the case of field tests, the horizontal and vertical dimensions of the treatment zone, monitoring procedures, closure and clean-up activities) necessary to meet the requirements in paragraph (c) of this section.

(c) Any field test or laboratory analysis conducted in order to make a demonstration under paragraph (a) of this section must:
  (1) Accurately simulate the characteristics and operating conditions for the proposed land treatment unit including:
    (i) The characteristics of the waste (including the presence of Appendix VIII of Part 261 of this chapter constituents);
    (ii) The climate in the area;
    (iii) The topography of the surrounding area;
    (iv) The characteristics of the soil in the treatment zone (including depth); and
    (v) The operating practices to be used at the unit.
  (2) Be likely to show that hazardous constituents in the waste to be tested will be completely degraded, transformed, or immobilized in the treatment zone of the proposed land treatment unit; and
  (3) Be conducted in a manner that protects human health and the environment considering:

(i) The characteristics of the waste to be tested;
(ii) The operating and monitoring measures taken during the course of the test;
(iii) The duration of the test;
(iv) The volume of waste used in the test;
(v) In the case of field test, the potential for migration of hazardous constituents to groundwater or surface water.

264.273 Design and operating requirements.

The Regional Administrator will specify in the facility permit how the owner or operator will design, construct, operate, and maintain the land treatment unit in compliance with this section.

(a) The owner or operator must design, construct, operate, and maintain the unit to maximize the degradation, transformation, and immobilization of hazardous constituents in the treatment zone. The owner or operator must design, construct, operate, and maintain the unit in accord with all design and operating conditions that were used in the treatment demonstration under Section 264.272. At a minimum, the Regional Administrator will specify the following in the facility permit:
(1) The rate and method of waste application to the treatment zone;
(2) Measures to control soil pH;
(3) Measures to enhance microbial or chemical reactions (e.g., fertilization, tilling); and
(4) Measures to control the moisture content of the treatment zone.

(b) The owner or operator must design, construct, operate, and maintain the treatment zone to minimize run-off of hazardous constituents during the active life of the land treatment unit.

(c) The owner or operator must design, construct, operate, and maintain a run-on control system capable of preventing flow onto the treatment zone during peak discharge from at least a 25-year storm.

(d) The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(e) Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain the design capacity of the system.

(f) If the treatment zone contains particulate matter which may be subject to wind dispersal, the owner or operator must manage the unit to control wind dispersal.

(g) The owner or operator must inspect the unit weekly and after storms to detect evidence of:
(1) Deterioration, malfunctions, or improper operation of run-on and run-off control systems; and
(2) Improper functioning of wind dispersal control measures.

264.274-264.275 [Reserved]

264.276 Food-chain crops.

The Regional Administrator may allow the growth of food-chain crops in or on the treatment zone only if the owner or operator satisfies the conditions of his section. The Regional Administrator will specify in the facility permit the specific food-chain crops which may be grown.

(a) (1) The owner or operator must demonstrate that there is no substantial risk to human health caused by the growth of such crops in or on the treatment zone by demonstrating, prior to the planting of such crops, that hazardous constituents other than cadmium:
(i) Will not be transferred to the food or feed portions of the crop by plant uptake or direct contact, and will not otherwise be ingested by food-chain animals (e.g., by grazing); or
(ii) Will not occur in greater concentrations in or on the food or feed portions of crops grown on the treatment zone than in or on identical portions of the same crops grown on untreated soils under similar conditions in the same region.
(2) The owner or operator must make the demonstration required under this paragraph prior to the planting of crops at the facility for all constituents identified in Appendix VIII of Part 261 of this chapter that are reasonably expected to be in, or derived from, waste placed in or on the treatment zone.
(3) In making a demonstration under this paragraph, the owner or operator may use field tests, greenhouse studies, available data or, in the case of existing units, operating data, and must:
(i) Base the demonstration on conditions similar to those present in the treatment zone, including soil characteristics (e.g., pH, cation exchange capacity), specific wastes, application rates, application methods, and crops to be grown; and

(ii) Describe the procedures used in conducting any tests, including the sample selection criteria, sample size, analytical methods, and statistical procedures.

(4) If the owner or operator intends to conduct field tests or greenhouse studies in order to make the demonstration required under this paragraph, he must obtain a permit for conducting such activities.

(b) The owner or operator must comply with the following conditions if cadmium is contained in wastes applied to the treatment zone:

(1) (i) The pH of the waste and soil mixture must be 6.5 or greater at the time of each waste application, except for waste containing cadmium at concentrations of 2 mg/kg (dry weight) or less;

(ii) The annual application of cadmium from waste must not exceed 0.5 kilograms per hectare (kg/ha) on land used for production of tobacco, leafy vegetables, or root crops grown for human consumption. For other food chain crops, the annual cadmium application rate must not exceed:

Time Period	Annual CD Application Rate Kilograms per Hectare
Present to June 30, 1984	2.0
July 1, 1984 to Dec. 31, 1986	1.25
Beginning Jan. 1, 1987	0.5

(iii) The cumulative application of cadmium from waste must not exceed 5 kg/ha if the waste and soil mixture has a pH of less than 6.5; and

(iv) If the waste and soil mixture has a pH of 6.5 or greater or is maintained at a pH of 6.5 or greater during crop growth, the cumulative application of cadmium from waste must not exceed: 5 kg/ha if soil cation exchange capacity (CEC) is less than 5 meg/100 g: 10 kg/ha if soil CEC is 5-15 meg/100 g; and 20 kg/ha if soil CEC is greater than 15 meg/100 g; or

(2) (i) Animal feed must be the only food-chain crop produced;

(ii) The pH of the waste and soil mixture must be 6.5 or greater at the time of waste application or at the time the crop is planted, whichever occurs later, and this pH level must be maintained whenever food-chain crops are grown;

(iii) There must be an operating plan which demonstrates how the animal feed will be distributed to preclude ingestion by humans. The operating plan must describe the measures to be taken to safeguard against possible health hazards from cadmium entering the food chain, which may result from alternative land uses; and

(iv) Future property owners must be notified by a stipulation in the land record or property deed which states that the property has received waste at high cadmium application rates and that food-chain crops must not be grown except in compliance with paragraph (b)(2) of this section.

264.277 [Reserved]

264.278 Unsaturated zone monitoring.

An owner or operator subject to this subpart must establish an unsaturated zone monitoring program to discharge the following responsibilities:

(a) The owner or operator must monitor the soil and soil-pore liquid to determine whether hazardous constituents migrate out of the treatment zone.

(1) The Regional Administrator will specify he hazardous constituents to be monitored in the facility permit. The hazardous constituents to be monitored are those specified under facility permit. The hazardous constituents to be monitored are those specified under Section 264.271(b).

(2) The Regional Administrator may require monitoring for principal hazardous constituents (PHCs) in lieu of the constituents specified under Section 264.271(b). PHCs are hazardous constituents contained in the wastes to be applied at the unit that are the most difficult to treat considering the combined effects of degradation, transformation, and immobilization. The Regional Administrator will establish PHCs if he finds, based on waste analyses, treatment demonstrations, or other data, that effect degradation, transformation, or immobilization of the PHCs will assure treatment at at least equivalent levels for the other hazardous constituents in the wastes.

(b) The owner or operator must install an unsaturated zone monitoring system that includes soil monitoring using soil cores and soil-pore liquid monitoring using devices such as lysimeers. The unsaturated zone monitoring system must consist of a sufficient number of sampling points at appropriate locations and depths to yield samples that:
  (1) Represent the quality of background soil-pore liquid quality and the chemical make-up of soil that has not been affected by leakage from the treatment zone; and
  (2) Indicate the quality of soil-pore liquid and the chemical make-up of the soil below the treatment zone.

(c) The owner or operator must establish a background value for each hazardous constituent to be monitored under paragraph (a) of this section. The permit will specify the background values for each constituent or specify the procedures to be used to calculate the background values.
  (1) Background soil values may be based on a one-time sampling at a background plot having characteristics similar to those of the treatment zone.
  (2) Background soil-pore liquid values must be based on at least quarterly sampling for one year at a background plot having characteristics similar to those of the treatment zone.
  (3) the owner or operator must express all background values in a form necessary for the determination of statistically significant increases under paragraph (f) of this section.
  (4) In taking samples used in the determination of all background values, the owner or operator must use an unsaturated zone monitoring system that complies with paragraph (b)(1) of this section.

(d) The owner or operator must conduct soil monitoring and soil-pore liquid monitoring immediately below the treatment zone. The Regional Administrator will specify the frequency and timing of soil and soil-pore liquid monitoring in he facility permit after considering the frequency, timing, and rate of waste application, and the soil-permeability. The owner or operator must express the results of soil and soil-pore liquid monitoring in a form necessary for the determination of statistically significant increases under paragraph (f) of this section.

(e) The owner or operator must use consistent sampling and analysis procedures that are designed to ensure sampling results that provide a reliable indication of soil-pore liquid quality and the chemical make-up of the soil below the treatment zone. At a minimum, the owner or operator must implement procedures and techniques for:
  (1) Sample collection;
  (2) Sample preservation and shipment;
  (3) Analytical procedures; and
  (4) Chain of custody control.

(f) The owner or operator must determine whether there is a statistically significant change over background values for any hazardous constituent to be monitored under paragraph (a) of this section below the treatment zone each time he conducts soil monitoring and soil-pore liquid monitoring under paragraph (d) of this section.
  (1) In determining whether a statistically significant increase has occurred, the owner or operator must compare the value of each constituent; as determined under paragraph (d) of this section to the background value for that constituent according to the statistical procedure specified in the facility permit under this paragraph.
  (2) The owner or operator must determine whether there has been a statistically significant increase below the treatment zone within a reasonable time period after completion of sampling. The Regional Administrator will specify that time period in the facility permit after considering the complexity of the statistical test and the availability of laboratory facilities to perform the analysis of soil and soil-pore liquid samples.
  (3) The owner or operator must determine whether there is a statistically significant increase below the treatment zone using a statistical procedure that provides reasonable confidence that migration from the treatment zone will be identified. The Regional Administrator will specify a statistical procedure in the facility permit that he finds:
    (i) Is appropriate for the distribution of the data used to establish background values; and
    (ii) Provides a reasonable balance between the probability of falsely identifying migration from the treatment zone and the probability of failing to identify real migration from the treatment zone.

(g) If the owner or operator determines, pursuant to paragraph (f) of this section, that there is a statistically significant increase of hazardous constituents below the treatment zone, he must:
  (1) Notify the Regional Administrator of this finding in writing within seven days. The notification must indicate what constituents have shown statistically significant increases.
  (2) Within 90 days, submit to the Regional Administrator an application for a permit modification to modify the operating practices at the facility in order to maximize the success of degradation, transformation, or immobilization processes in the treatment zone.

(h) If the owner or operator determines, pursuant to paragraph (f) of this section, that there is a statistically significant increase of hazardous constituents below the treatment zone, he may demonstrate that a source other than regulated units caused the increase or that the increase resulted from an error in sampling, analysis, or evaluation. While the owner or operator may make a demonstration under this paragraph in addition to, or in lieu of, submitting a permit modification application under paragraph (g)(2) of this section, he is not relieved of the requirement to submit a permit modification application within the time specified in paragraph (g)(2) of this section unless the demonstration made under this paragraph successfully shows that a source other than regulated

units caused the increase or that the increase resulted from an error in sampling, analysis, or evaluation. In making a demonstration under this paragraph, the owner or operator must:

(1) Notify the Regional Administrator in writing within seven days of determining statistically significant increase below the treatment zone that he intends to make a determination under this paragraph;

(2) Within 90 days, submit a report to the Regional Administrator demonstrating that a source other than the regulated units caused the increase or that the increase resulted from error in sampling, analysis, or evaluation;

(3) Within 90 days, submit to the Regional Administrator an application for a permit modification to make any appropriate changes to the unsaturated zone monitoring program at the facility; and

(4) Continue to monitor in accordance with the unsaturated zone monitoring program established under this section.

264.279 Recordkeeping.

The owner or operator must include hazardous waste application dates and rates in the operating record required under Section 264.73.

264.280 Closure and post-closure care.

(a) During the closure period the owner or operator must:

(1) Continue all operations (including pH control) necessary to maximize degradation, transformation, or immobilization of hazardous constituents within he treatment zone as required under Section 264.273(a), except to the extent such measures are inconsistent with paragraph (a)(8) of this section.

(2) Continue all operations in the treatment zone to minimize run-off of hazardous constituents as required under Section 264.273(b);

(3) Maintain the run-on control system required under Section 264.273(c);

(4) Maintain the run-off management system required under Section 264.273(d);

(5) Control wind dispersal of hazardous waste if required under Section 264.273(f);

(6) Continue to comply with any prohibitions or conditions concerning growth of food-chain crops under Section 264.276;

(7) Continue unsaturated zone monitoring in compliance with Section 264.278, except that soil-pore liquid monitoring may be terminated 90 days after the last application of waste to the treatment zone; and

(8) 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. The vegetative cover must be capable of maintaining growth without extensive maintenance.

(b) For the purpose of complying with Section 264.115, when closure is completed the owner or operator may submit to the Regional Administrator certification by an independent qualified soil-scientist, in lieu of an independent registered professional engineer, that the facility has been closed in accordance with the specifications in the approved closure plan.

(c) During the post-closure care period the owner or operator must:

(1) Continue all operations (including pH control) necessary to enhance degradation and transformation and sustain immobilization of hazardous constituents in the treatment zone to the extent that such measures are consistent with other post-closure care activities;

(2) Maintain a vegetative cover over closed portions of the facility;

(3) Maintain the run-on control system required under Section 264.273(c);

(4) Maintain the run-off management system required under Section 264.273(f);

(5) Control wind dispersal of hazardous waste if required under Section 264.273(f);

(6) Continue to comply with any prohibitions or conditions concerning growth of food-chain crops under Section 264.276; and

(7) Continue unsaturated zone monitoring in compliance with Section 264.278, expect that soil-pore liquid monitoring may be terminated 90 days after the last application of waste to the treatment zone.

(d) The owner or operator is not subject to regulation under paragraphs (a)(8) and (c) of this section if the Regional Administrator finds that the level of hazardous constituents in the treatment zone soil does not exceed the background value of those constituents by an amount that is statistically significant when using the test specified in paragraph (d)(3) of this section. The owner or operator may submit such a demonstration to the Regional Administrator at any time during the closure of post-closure care periods. For the purposes of this paragraph;

(1) The owner or operator must establish background soil values and determine whether there is a statistically significant increase over those values for all hazardous constituents specified in the facility permit under Section 264.271(b).
   (i) Background soil values may be based on a one-time sampling of a background plot having characteristic s similar to those of the treatment zone.
   (ii) The owner or operator must express background values and values for hazardous constituents in the treatment zone in a form necessary for the determination of statistically significant increases under paragraph (d)(3) of this section.
(2) In taking samples used in the determination of background and treatment zone values, the owner or operator must take samples at a sufficient number of sampling points and at appropriate locations and depths to yield samples that represent the chemical make-up of soil that has not been affected by leakage from the treatment zone and the soil within the treatment zone, respectively.
(3) In determining whether a statistically significant increase has occurred, the owner or operator must compare the value of each constituent in the treatment zone to the background value for that constituent using a statistical procedure that provides reasonable confidence that constituent presence in the treatment zone will be identified. The owner or operator must use a statistical procedure that:
   (i) Is appropriate for the distribution of the data used to establish background values; and
   (ii) Provides a reasonable balance between the probability of falsely identifying hazardous constituent presence in the treatment zone and the probability of failing to identify real presence in the treatment zone.

(e) The owner or operator is not subject to regulation under Subpart F of this chapter if the Regional Administrator finds that the owner or operator satisfies paragraph (d) of this section and if unsaturated zone monitoring under Section 264.278 indicates that hazardous constituents have not migrated beyond the treatment zone during the active life of the land treatment unit.

264.281 Special requirements for ignitable or reactive waste.

The owner or operator must not apply ignitable or reactive waste to the treatment zone unless the waste and the treatment zone meet all applicable requirements of 40 CFR part 268, and:

(a) The waste is immediately incorporated into the soil so that:
   (1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under Sections 261.21 or 261.23 of this chapter; and
   (2) Section 264.17(b) is complied with; or
(b) 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.

264.282 Special requirements for Incompatible wastes.

The owner or operator must not place incompatible wastes, or incompatible wastes and materials (see Appendix V of this part for examples), in or on the same treatment zone, unless Section 264.17(b) is complied with.

264.283 Special requirements for hazardous waste FO20, FO21, FO22, FO23, FO26, and FO27.

(a) Hazardous wastes FO20, FO21, FO22, FO23, FO26, and FO27 must not be placed in a land treatment unit unless the owner or operator operates the facility in accordance with a management plan for these wastes that is approved by the Regional Administrator pursuant to the standards set out in this paragraph, and in accord with all other applicable requirements of this part. The factors to be considered are:
   (1) The volume physical and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere.
   (2) The attenuative properties of underlying and surrounding soils or other materials;
   (3) The mobilizing properties of other materials co-disposed with these wastes; and
   (4) The effectiveness of additional treatment, design, or monitoring techniques.
(b) The Regional Administrator may determine that additional design, operating, and monitoring requirements are necessary for land treatment facilities managing hazardous wastes FO20, FO21, FO22, FO23, FO26, and FO27 in order to reduce the possibility of migration of these wastes to groundwater, surface water, or air so as to protect human health and the environment.

264.284-264.299 [Reserved]

(o) 40 CFR 264.300 through 264.317 (Subpart N), "Landfills", are incorporated by reference including subsequent amendments and editions.

SUBPART N - LANDFILLS

264.300 Applicability.

The regulations in this subpart apply to owners and operators of facilities that dispose of hazardous waste in landfills, except as Section 274.1 provides otherwise.

264.301 Design and operating requirements.

(a) Any landfill that is not covered by paragraph (c) of this section or Section 265.301(a) of this chapter must have a liner system for all portions of the landfill (except for existing portions of such landfill). The liner system must have:
  (1) A liner that is designed, constructed, and installed to prevent any migration of wastes out of the landfill to the adjacent subsurface soil or groundwater or surface water at any time during the active life (including the closure period) of the landfill. The liner must be constructed of materials that prevent wastes from passing into the liner during the active life of the facility. The liner must be:
    (i) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;
    (ii) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and
    (iii) Installed to cover all surrounding earth likely to be in contact with the waste or leachate; and
  (2) A leachate collection and removal system immediately above the liner that is designed, constructed, maintained, and operated to collect and remove leachate from the landfill. The Regional Administrator will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm (one foot). The leachate collection and removal system must be:
    (i) Constructed of materials that are:
      (A) Chemically resistant to the waste managed in the landfill and the leachate expected to be generated; and
      (B) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and by any equipment used at the landfill; and
    (ii) Designed and operated to function without clogging through the scheduled closure of the landfill.

(b) The owner or operator will be exempted from the requirements of paragraph (a) of this section if the Regional Administrator finds, based on a demonstration by the owner or operator, that alternative design and operating practices, together with location characteristics, will prevent the migration of any hazardous constituents (see Section 264.93) into the groundwater or surface water at any future time. In deciding whether to grant an exemption, the Regional Administrator will consider:
  (1) The nature and quantity of the wastes;
  (2) The proposed alternate design and operation;
  (3) The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the landfill and groundwater or surface water; and
  (4) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.

(c) The owner or operator of each new landfill unit on which construction commences after January 29, 1992, each lateral expansion of a landfill unit on which construction commences after July 29, 1992, and each replacement of an existing landfill unit that is to commence reuse after July 29, 1992, must install two or more liners and a leachate collection and removal system above and between such liners. "Construction commences" is as defined in Section 260.10 of this chapter under "existing facility".
  (1) (i) The liner system must include:
    (A) A top liner designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into such liner during the active life and post-closure care period; and

(B) A composite bottom liner, consisting of at least two components. The upper component must be designed and constructed of materials (e.g., a geomembrane) to prevent the migration of hazardous constituents into this component during the active life and post-closure care period. The lower component must be designed and constructed of materials to minimize the migration of hazardous constituents if a breach in the upper component were to occur. The lower component must be constructed of at least 3 feet (91 cm) of compacted soil material with a hydraulic conductivity of no more than 1×10^{-7} cm/sec.

(ii) The liners must comply with paragraphs (a)(1)(i), (ii), and (iii) of this section

(2) The leachate collection and removal system immediately above the top liner must be designed, constructed, operated, and maintained to collect and remove leachate from the landfill during the active life and post-closure care period. The Regional Administrator will specify design and operating conditions in the permit to ensure that the leachate depth over the liner does not exceed 30 cm (one foot). The leachate collection and removal system must comply with paragraphs (3)(c)(iii) and (iv) of this section.

(3) The leachate collection and removal system between the liners, and immediately above the bottom composite liner in the case of multiple leachate collection and removal systems, is also a leak detection system. This leak detection system must be capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time through all areas of the top liner likely to be exposed to waste or leachate during the active life and post-closure care period. The requirements for a leak detection system in this paragraph are satisfied by installation of a system that is, at a minimum:

(i) Constructed with a bottom slope of one percent or more;

(ii) Constructed of granular drainage materials with a hydraulic conductivity of 1×10^{-2} cm/sec or more and a thickness of 12 inches (30.5 cm) or more; or constructed of synthetic or geonet drainage materials with a transmissivity of $3 \times 10^{-5} m^2$/sec or more;

(iii) Constructed of materials that are chemically resistant to the waste managed in the landfill and the leachate expected to be generated, and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlying wastes, waste cover materials, and equipment used at the landfill;

(iv) Designed and operated to minimize clogging during the active life and post-closure care period; and

(v) Constructed with sumps and liquid removal methods (e.g., pumps) of sufficient size to collect and remove liquids from the sump and prevent liquids from backing up into the drainage layer. Each unit must have its own sump(s). The design of each sump and removal system must provide a method for measuring and recording the volume of liquids present in the sump and of liquids removed.

(4) The owner or operator shall collect and remove pumpable liquids in the leak detection system sumps to minimize the head on the bottom liner.

(5) The owner or operator of a leak detection system that is not located completely above the seasonal high water table must demonstrate that the operation of the leak detection system will not be adversely affected by the presence of ground water.

(d) The Regional Administrator may approve alternative design or operating practices to those specified in paragraph (c) of this section if the owner or operator demonstrates to the Regional Administrator that such design and operating practices, together with location characteristics:

(1) Will prevent the migration of any hazardous constituent into the ground water or surface water at least as effectively as the liners and leachate collection and removal systems specified in paragraph (c) of this section; and

(2) Will allow detection of leaks of hazardous constituents through the top liner at least as effectively.

(e) The double liner requirement set forth in paragraph (c) of this section may be waived by the Regional Administrator for any monofill, if:

(1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the Toxicity Characteristic in Section 261.24 of this chapter with EPA Hazardous Waste Numbers D004 through D017; and

(2) (i) (A) The monofill has at least one liner for which their is no evidence that such liner is leaking;

(B) The monofill is located more than one-quarter mile from an underground source of drinking water (as that term is defined in Section 144.3 of this chapter); and

(C) The monofill is in compliance with generally applicable groundwater monitoring requirements for facilities with permits under RCRA 3005(c); or

(ii) The owner or operator demonstrates that the monofill is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into groundwater or surface water at any future time.

(f) The owner or operator of any replacement landfill unit is exempt from paragraph (c) of this section if:
  (1) The existing unit was constructed in compliance with the design standards of section 3004(o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act; and
  (2) There is no reason to believe that the liner is not functioning as designed.

(g) The owner or 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.

(h) The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(i) Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

(j) If the landfill contains any particulate matter which may be subject to wind dispersal, the owner or operator must cover or otherwise manage the landfill to control wind dispersal.

(k) The Regional Administrator will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

(l) Any permit under RCRA 3005(c) which is issued fora landfill located within the State of Alabama shall require the installation of two or more liners and a leachate collection system above and between such liners, notwithstanding any other provision of RCRA.

264.302 Action Leakage Rate

(a) The Regional Administrator shall approve an action leakage rate for surface impoundment units subject to Section 264.301(c) or (d). The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties inthe design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

(b) To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly or monthly flow rate from the monitoring data obtained under Section 264.303(c), to an average daily flow rate (gallons per acre per day) for each sump. Unless the Regional Administrator approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period, and monthly during the post-closure care period when monthly monitoring is required under Section 264.303(c).

264.303 Monitoring and Inspection.

(a) During construction or installation, liners (except in the case of existing portions of landfills exempt from Section 264.301(a)) and cover systems (e.g., membranes, sheets, or coating) must be inspected for uniformity, damage, and imperfections (e.g., holes, cracks, think spots, or foreign materials). Immediately after construction or installation:
  (1) Synthetic liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters; and
  (2) Soil-based and admixed liners and covers must be inspected for imperfections, including lenses, cracks, channels, root holes, or other structural non-uniformities that may cause an increase in the permeability of the liner or cover.

(b) While a landfill is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:
  (1) Deterioration, malfunctions, or improper operation of run-on and run-off control systems;
  (2) Proper functioning of wind dispersal control systems, where present; and
  (3) The presence of leachate in and proper functioning of leachate collection and removal systems, where present.

(c) (1) An owner or operator required to have a leak detection system under Section 264.301(c) or (d) must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.
  (2) After the final cover is installed, the amount of liquids removed from each leak detection system sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semi-annually. If at any time during the post-closure care

period the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator must return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

(3) "Pump operating level" is a liquid level proposed by the owner or operator and approved by the Regional Administrator based on pump activation level, sump dimensions, and level that avoids backup into the drainage layer and minimizes head in the sump.

264.304 Response Actions

(a) The owner or operator of landfill units subject to Section 264.391(c) or (d) must have an approved response action plan before receipt of waste. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in paragraph (b) of this section.

(b) If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:
  (1) Notify the Regional Administrator in writing of the exceedence within seven days of the determination;
  (2) Submit a preliminary written assessment to the Regional Administrator within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;
  (3) Determine to the extent practicable the location, size, and cause of any leak;
  (4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;
  (5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and
  (6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Regional Administrator the results of the analyses specified in paragraphs (b)(3), (4), and (5) of this section, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the Regional Administrator a report summarizing the results of any remedial actions taken and actions planned.

(c) To make the leak and/or remediation determinations in paragraphs (b)(3), (4), and (5) of this section, the owner or operator must:
  (1) (i) Assess the source of liquids and amounts of liquids by source,
  (ii) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and
  (iii) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or
  (2) Document why such assessments are not needed.

264.308 [Reserved]

264.309 Surveying and recordkeeping.

The owner or operator of a landfill must maintain the following items in the operating record required under Section 264.73:

(a) On a map, the exact location and dimensions, including depth, of each cell with respect to permanently surveyed benchmarks; and

(b) The contents of each cell and the approximate location of each hazardous waste type within each cell.

264.310 Closure and post-closure care.

(a) At final closure of the landfill or upon closure of any cell, the owner or operator must cover the landfill or cell with a final cover designed and constructed to:
  (1) Provide long-term minimization of migration of liquids through the closed landfill;
  (2) Function with minimum maintenance;
  (3) Promote drainage and minimize erosion or abrasion of the cover;
  (4) Accommodate settling and subsidence so that the cover's integrity is maintained; and
  (5) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

(b) After final closure, the owner or operator must comply with all post-closure requirements contained in Sections 264.117-264.120, including maintenance and monitoring throughout the post-closure care period (specified in the permit under Section 264.117). the owner or operator must:
  (1) Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;
  (2) Continue to operate the leachate collection and removal system until leachate is no longer detected;
  (3) Maintain and monitor the leak detection system in accordance with Sections 264.301(c)(3)(iv) and (4) and 264.303(c), and comply with all other applicable leak detection system requirements of this part;
  (4) Maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of Subpart F of this part;
  (5) Prevent run-on and run-off from eroding or otherwise damaging the final cover; and
  (6) Protect and maintain surveyed benchmarks used in complying with Section 264.309.

264.311 [Reserved]

264.312 Special requirements for ignitable or reactive waste.

(a) Except as provided in paragraph (b) of this section, and in Section 264.316, ignitable or reactive waste must not be placed in a landfill, unless the waste and landfill meet all applicable requirements of part 268, and:
  (1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under Section 261.21 or 263.23 of this chapter; and
  (2) Section 264.17(b) is complied with.
(b) Except for prohibited wastes which remain subject to treatment standards in subpart D of part 268, ignitable wastes in containers may be landfilled without meeting the requirements of paragraph (a) of this section, 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. At a minimum, ignitable wastes must be disposed of in non-leaking containers which are carefully handled and placed so as to avoid heat, sparks, rupture, or any other condition that might cause ignition of the wastes; must be covered daily with soil or other non-combustible material to minimize the potential for ignition of the wastes; and must not be disposed of in cells that contain or will contain other wastes which may generate heat sufficient to cause ignition of the waste.

264.313 Special requirements for incompatible wastes.

Incompatible wastes, or incompatible wastes and materials (see Appendix V of this part for example), must not be placed in the same landfill cell, unless Section 264.17(b) is complied with.

264.314 Special requirements for bulk and containerized waste.

(a) Bulk or non-containerized liquid waste or waste containing free liquids may be placed in a landfill prior to May 8, 1985, only if:
  (1) The landfill has a liner and leachate collection and removal system that meet the requirements of Section 264.301(a); or
  (2) Before disposal, the liquid waste or waste containing free liquids is treated or stabilized, chemically or physically (e.g., by mixing with a sorbent solid), so that free liquids are no longer present.
(b) Effective May 8, 1985, the placement of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids (whether or not sorbents have been added) in any landfill is prohibited.
(c) To demonstrate the absence or presence of free liquids in either a containerized or a bulk waste, the following test must be used: Method 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of this chapter.
(d) Containers holding free liquids must not be placed in a landfill unless;
  (1) All free-standing liquid:
    (i) has been removed by decanting, or other methods;
    (ii) has been mixed with sorbent or solidified so that free-standing liquid is no longer observed; or
    (iii) has been otherwise eliminated; or
  (2) The container is very small, such as an ampule; or
  (3) The container is designed to hold free liquids for use other than storage, such as a battery or capacitor; or

(4) The container is a lab pack as defined in Section 264.316 and is disposed of in accordance with Section 264.316.

(e) Sorbents used to treat free liquids to be disposed of in landfills must be nonbiodegradable. Nonbiodegradable sorbents are: materials listed or described in paragraph (e)(1) of this section; materials that pass one of the tests in paragraph (e) (2) of this section; or materials that are determined by EPA to be nonbiodegradable through the part 260 petition process.

(1) Nonbiodegradable sorbents, (i) Inorganic minerals, other inorganic materials, and elemental carbon (e.g., aluminosilicates, clays, smectites, Fuller's earth, bentonite, calcium bentonite, montmorillonite, calcined montmorillonite, kaolinite, micas (illite), vermiculites, zeolites; calcium carbonate (organic free limestone); oxides/ hydroxides, alumina, lime, silica (sand), diatomaceous earth; perlite (volcanic glass); expanded volcanic rock; volcanic ash; cement kiln dust; fly ash; rice hull ash; activated charcoal/ activated carbon); or

(ii) High molecular weight synthetic polymers (e.g., polyethylene, high density polyethylene (HDPE), polypropylene, polystyrene, polyurethane, polyacrylate, polynorborene, polyisobutylene, ground synthetic rubber, cross-linked allylstyrene and tertiary butyl copolymers). This does not include polymers derived from biological material or polymers specifically designed to be degradable; or

(iii) Mixtures of these nonbiodegradable materials.

(2) Tests for nonbiodegradable sorbents. (i) The sorbent material is determined to be nonbiodegradable under ASTM Method G21-70 (1984a)--Standard Practice for Determining Resistance of Synthetic Polymer Materials to Fungi; or

(i) The sorbent material is determined to be nonbiodegradable under ASTM Method G21-70 (1984a)--Standard Practice for Determining Resistance of Synthic Polymer Materials to Fungi; or

(ii) The sorbent material is determined to be nonbiodegradable under ASTM Method G22-76 (1984b)--Standard Practice For Determining Resistance of Plastics to Bacteria.

(f) Effective November 8, 1985, the placement of any liquid which is not a hazardous waste in a landfill is prohibited unless the owner or operator of such landfill demonstrates to the Regional Administrator, or the Regional Administrator determines, that:

(1) The only reasonably available alternative to the placement in such landfill is placement in a landfill or unlined surface impoundment, whether or not permitted or operating under interim status which contains, or may reasonably be anticipated to contain, hazardous waste; and

(2) Placement in such owner or operator's landfill will not present a risk of contamination of any underground source of drinking water (as that term is defined in Section 144.3 of this chapter.)

(d) Effective May 8, 1985, the placement of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids (whether or not absorbents have been added) in any landfill or prohibited.

264.315 Special requirements for containers.

Unless they are very small, such as an ampule, containers must be either:

(a) At least 90 percent full when placed in the landfill; or

(b) Crushed, shredded, or similarly reduced in volume to the maximum practical extent before burial in the landfill.

264.316 Disposal of small containers of hazardous waste in over-packed drugs (lab packs).

Small containers of hazardous waste in overpacked drums (lab packs) may be placed in a landfill if the following requirements are met:

(a) Hazardous waste must be packaged in non-leaking inside containers. The inside containers must be of a design and constructed of a material that will not react dangerously with, be decomposed by, or be ignited by the contained waste. Inside containers must be tightly and securely sealed. The inside containers must be of the size and type specified in the Department of Transportation (DOT) hazardous materials regulations (49 CFR Parts 173, 178, and 179), if those regulations specify a particular inside container for the waste.

(b) The inside containers must be overpacked in an open head DOT-specification metal shipping container (49 CFR Parts 178 and 179) of no more than 416-liter (110 gallon) capacity and surrounded by, at a minimum, a sufficient quantity of sorbent material, determined to be nonbiodegradable in accordance with Section 264.314(e), to completely sorb all of the liquid contents of the inside containers. The metal outer container must be full after it has been packed with inside containers and sorbent material.

(c) The sorbent material used must not be capable of reacting dangerously with, being decomposed by, or being ignited by the contents of the inside containers, in accordance with Section 264.17(b).

(d) Incompatible wastes, as defined in 260.10 of this chapter, must not be placed in the same outside container.

(e) Reactive wastes, other than cyanide- or sulfide-bearing waste as defined in Section 261.23(a)(5) of this chapter, must be treated or rendered non-reactive prior to packaging in accordance with paragraphs (a) through(d) of this section. Cyanide- and sulfide-bearing reactive waste may be packed in accordance with paragraphs (a) through (d) of this section without first being treated or rendered non-reactive.

(f) Such disposal is in compliance with the requirements of Part 268. Persons who incinerate lab packs according to the requirements in 40 CFR 268.42(c)(1) may use fiber drums in place of metal outer containers. Such fiber drums must meet the DOT specifications in 49 CFR 173.12 and be overpacked according to the requirements in paragraph (b) of this section.

264.317 Special requirements for hazardous wastes FO20, FO21, FO22, FO23, FO26, and FO27.

(a) Hazardous Wastes FO20, FO21, FO22, FO23, FO26, and FO27 must not be placed in a landfill unless the owner or operator operates the landfill in accord with a management plan for these wastes that is approved by the Regional Administrator pursuant to the standards set out in this paragraph, and in accord with all other applicable requirements of this part. The factors to be considered are:
  (1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through the soil or to volatilize or escape into the atmosphere;
  (2) The a attenuative properties of underlying and surrounding soils or other materials;
  (3) The mobilizing properties of other materials co-disposed with these wastes; and
  (4) The effectiveness of additional treatment, design, or monitoring requirements.

(b) The Regional Administrator may determine that additional design, operating, and monitoring requirements are necessary for landfills managing hazardous wastes FO20, FO21, FO22, FO23, FO26, and FO27 in order to reduce the possibility of migration of these wastes to groundwater, surface water, or air so as to protect human health and the environment.

264.318-264.339 [Reserved]

(p) A long-term storage facility shall meet groundwater protection, closure and post-closure, and financial requirements for disposal facilities as specified in Paragraphs (g), (h), and (i) of this Rule.

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(q) 40 CFR 264.340 through 264.351 (Subpart O), "Incinerators", are incorporated by reference including subsequent amendments and editions.

SUBPART O - INCINERATORS

264.340 Applicability.

(a) The regulations of this subpart apply to owners and operators of hazardous waste incinerators (as defined in Section 260.10 of this chapter), except as 264.1 provides otherwise. The following facility owners or operators are considered to incinerate hazardous waste:
  (1) Owners or operators of hazardous waste incinerators (as defined in 260.10 of this chapter); and
  (2) Owners or operators who burn hazardous waste in boilers or in industrial furnaces in order to destroy them, or who burn hazardous waste in boilers or in industrial furnaces for any recycling purposes and elect to be regulated under this subpart.

(b) After consideration of the waste analysis included with Part B of the permit application, the Regional Administrator, in establishing the permit conditions, must exempt the applicant from all requirements of this subpart except Section 264.341 (Waste analysis) and Section 264.351 (Closure),
  (1) If the Regional Administrator finds that the waste to be burned is:
    (i) Listed as a hazardous waste in Part 261, Subpart D of this chapter solely because it is ignitable (Hazard Code I), corrosive (Hazard Code C), or both; or
    (ii) Listed as a hazardous waste in Part 261, Subpart D of this chapter solely because it is reactive (Hazard Code R) for characteristics other than those listed in Section 261.23(a)(4) and (5), and will not be burned when other hazardous wastes are present in the combustion zone; or
    (iii) A hazardous waste solely because it possesses the characteristic of ignitability, corrosivity, or both, as determined by the test for characteristics of hazardous wastes under Part 261, Subpart C of this chapter; or
    (iv) A hazardous waste solely because it possesses any of the reactivity characteristics described by Section 261.23(a)(1), (2), (3), (6), (7), and (8) of this chapter, and will not be burned when other hazardous wastes are present in the combustion zone; and
  (2) If the waste analysis shows that the waste contains none of the hazardous constituents listed in Part 261, Appendix VIII of this chapter, which would reasonably be expected to be in the waste.

(c) If the waste to be burned is one which is described by paragraphs (b)(1)(i), (ii), (iii), or (iv) of this section and contains insignificant concentrations of the hazardous constituents listed in Part 261, Appendix VIII of this chapter, then the Regional Administrator may, in establishing permit conditions, exempt the applicant from all requirements of this subpart, except Section 264.341 (Waste analysis) and Section 264.351 (Closure), after consideration of the waste analysis included with Part B of the permit application, unless the Regional Administrator finds that the waste will pose a threat to human health and the environment when burned in an incinerator.

(d) The owner or operator of an incinerator may conduct trial burns subject only to the requirements of Section 270.62 of this chapter (Short term and incinerator permits).

264.341 Waste analysis.

(a) As a portion of a trial burn plan required by Section 270.62 of this chapter, or with Part B of the permit application, the owner or operator must have included an analysis of the waste feed sufficient to provide all information required by Section 270.62(b) or Section 270.19 of this chapter. Owners or operators of new hazardous waste incinerators must provide the information required by Section 270.62(c) or 270.19 of this chapter to the greatest extent possible.

(b) Throughout normal operation the owner or operator must conduct sufficient waste analysis to verify that waste feed to the incinerator is within the physical and chemical composition limits specified in his permit (under Section 264.345(b)].

264.342 Principal organic hazardous constituents (POHCs).

(a) Principal organic hazardous constituents (POHCs) in the waste feed must be treated to the extent required by the performance standards of Section 264.343.

(b) (1) One or more POHCs will be specified in the facility's permit, from among those constituents listed in Part 261, Appendix VIII of this chapter, for each waste feed to be burned. This specification will be based on the degree of difficulty of incineration of the organic constituents in the waste and on their concentration or mass in the waste feed, considering the results of waste analyses and trial burns or alternative data submitted with Part B of the facility's permit application. Organic constituents which represent the greatest degree of difficulty of incineration will be those most likely to be designated as POHCs. Constituents are more likely to be designated as POHCs if they are present in large quantities or concentrations in the waste.

(2) Trial POHCs will be designated for performance of trial burns in accordance with the procedure specified in Section 270.62 of this chapter for obtaining trial burn permits.

264.343 Performance standards.

An incinerator burning hazardous waste must be designed, constructed, and maintained so that, when operated in accordance with operating requirements specified under Section 264.345, it will meet the following performance standards:

(a) (1) Except as provided in paragraph (a)(2), an incinerator burning hazardous waste must achieve a destruction and removal efficiency (DRE) of 99.99% for each principal organic hazardous constituent (POHC) designated (under Section 264.342) in its permit for each waste feed. DRE is determined for each POHC from the following equation:

$$DRE = \frac{(W_{in} - W_{out})}{W_{in}} \times 100\%$$

Where:

W_{in} = Mass feed rate of one principal organic hazardous constituent (POHC) in the waste stream feeding the incinerator, and

W_{out} = Mass emission rate of the same POHC present in exhaust emissions prior to release to the atmosphere.

(2) An incinerator burning hazardous wastes FO20, FO21, FO22, FO23, FO26, or FO27 must achieve a destruction and removal efficiency (DRE) of 99.9999% for each principal organic hazardous constituent (POHC) designated (under Section 264.342) in its permit. This performance must be demonstrated on POHCs that are more difficult to incinerate than tetra-, penta-, and hexachlorodibenzo-p-dioxins and dibenzofurans. DRE is determined for each POHC from the equation in Section 264.343(a)(1). In addition, the owner or operator of the incinerator must notify the Regional Administrator of his intent to incinerate hazardous wastes FO20, FO21, FO22, FO23, FO26, or FO27.

(b) An incinerator burning hazardous waste and producing stack emission of more than 1.8 kilograms per hour (4 pounds per hour) of hydrogen chloride (HCl) must control HCl emissions such that the rate of emission is no greater than the larger of either 1.8 kilograms per hour or 1% of the HCl in the stack gas prior to entering any pollution control equipment.

(c) An incinerator burning hazardous waste must not emit particulate matter in excess of 180 milligrams per dry standard cubic meter (0.08 grains per dry standard cubic foot) when corrected for the amount of oxygen in the stack gas according to the formula:

$$P_c = P_m \times \frac{14}{21-Y}$$

Where P_c is the corrected concentration of particulate matter, P_m is the measured concentration of particulate matter, and Y is the measured concentration of oxygen in the stack gas, using the Orsat method for oxygen analysis of dry flue gas, presented in Part 60, Appendix A (Method 3), of this chapter. This correction procedure is to be used by all hazardous waste incinerators except those operating under conditions of oxygen enrichment. For these facilities, the Regional Administrator will select an appropriate correction procedure, to be specified in the facility permit.

(d) For purposes of permit enforcement, compliance with the operating requirements specified in the permit (under Section 264.345) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the performance requirements of this section may be "information justifying modification, revocation, or reissuance of a permit under Section 270.41 of this chapter.

264.344 Hazardous waste incinerator permits.

(a) The owner or operator of a hazardous waste incinerator may burn only wastes specified in his permit and only under operating conditions specified for those wastes under Section 264.345, except:
  (1) In approved trial burns under Section 270.62 of this chapter; or
  (2) Under exemptions created by Section 264.340.

(b) Other hazardous wastes may be burned only after operating conditions have been specified in a new permit or a permit modification as applicable. Operating requirements for new wastes may be based on either trial burn results or alternative data included with Part B of a permit application under Section 270.19 of this chapter.

(c) The permit for a new hazardous waste incinerator must establish appropriate conditions for each of the applicable requirements of this subpart, including but not limited to allowable waste, feeds and operating conditions necessary to meet the requirements of Section 264.345, sufficient to comply with the following standards:
  (1) For the period beginning with initial introduction of hazardous waste to the incinerator and ending with initiation of the trial burn, and only for the minimum time required to establish operating conditions required in paragraph (c)(2) of this section, not to exceed a duration of 720 hours operating time for treatment of hazardous waste, the operating requirements must be those most likely to ensure compliance with the performance standards of Section 264.343, based on the Regional Administrator's engineering judgment. The Regional Administrator may extend the duration of this period once for up to 720 additional hours when good cause for the extension is demonstrated by the applicant.
  (2) For the duration of the trial burn, the operating requirements must be sufficient to demonstrate compliance with the performance standards of Section 264.343 and must be in accordance with the approved trial burn plan;
  (3) For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, and submission of the trial but results by the applicant, and review of the trial burn results and modification of the facility permit by the Regional Administrator, the operating requirements must be those most likely to ensure compliance with the performance standards of Section 264.343, based on the Regional Administrator's engineering judgment.
  (4) For the remaining duration of the permit, the operating requirements must be those demonstrated, in a trial burn or by alternative data specified in Section 270.19(c) of this chapter, as sufficient to ensure compliance with the performance standards of Section 264.343.

264.345 Operating requirements.

(a) An incinerator must be operated in accordance with operating requirements specified in the permit. These will be specified on a case-by-care basis and as those demonstrated (in a trial burn or in alternative data as specified in Section 264.344(b) and included with Part B of a facility's permit application) to be sufficient to comply with the performance standards of Section 264.343.

(b) Each set of operating requirements will specify the composition of the waste feed (including acceptable variations in the physical or chemical properties of the waste feed which will not affect compliance with the performance requirement of Section 264.343) to which the operating requirements apply. For each such waste feed, the permit will specify acceptable operating limits including the following conditions:
  (1) Carbon monoxide (CO) level in the stack exhaust gas;
  (2) Waste feed rate;
  (3) Combustion temperature;
  (4) An appropriate indicator of combustion gas velocity;
  (5) Allowable variations in incinerator system design or operating procedures; and
  (6) Such other operating requirements as are necessary too ensure that the performance standards of Section 264.343 are met.

(c) During start-up and shut-down of an incinerator, hazardous waste (except waste exempted in accordance with Section 264.340) must not be fed into the incinerator unless the incinerator is operating within the conditions of operation (temperature, air feed rate, etc.) specified in the permit.

(d) Fugitive emissions from the combustion zone must be controlled by:
  (1) Keeping the combustion zone totally sealed against fugitive emissions, or

(2) Maintaining a combustion zone pressure lower than atmospheric pressure; or
(3) An alternate means of control demonstrated (with Part B of the permit application) to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.

(e) An incinerator must be operated with a functioning system to automatically cut off waste, feed to the incinerator when operating conditions deviate from limits established under paragraph (a) of this section.

(f) An incinerator must cease operation when changes in waste feed, incinerator design, or operating conditions exceed limits designated in its permit.

264.346 [Reserved]

264.347 Monitoring and inspections.

(a) The owner or operator must conduct as a minimum the following monitoring while incinerating hazardous waste:
(1) Combustion temperature, waste feed rate, and the indicator of combustion gas velocity specified in the facility permit must be monitored on a continuous basis.
(2) CO must be monitored on a continuous basis at a point in the incinerator downstream of the combustion zone and prior to release to the atmosphere.
(3) Upon request by the Regional Administrator, sampling and analysis of the waste and exhaust emissions must be conducted to verify that the operating requirements established in the permit achieve the performance standards of Section 264.343.

(b) The incinerator and associated equipment (pumps, valves, conveyors, pipes, etc.) must be subjected to thorough visual inspection, at least daily for leaks, spills, fugitive emissions, and signs of tampering.

(c) The emergency waste feed cut-off system and associated alarms must be tested at least weekly to verify operability, unless the applicant demonstrates to the Regional Administrator that weekly inspections will unduly restrict or upset operations and that less frequent inspection will be adequate. At a minimum, operational testing must be conducted at least monthly.

(d) This monitoring and inspection data must be recorded and the records must be placed in the operating log required by Section 264.73.

264.348-264.350 [Reserved]

264.351 Closure.

At closure the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the incinerator site.

[Comment: At closure, as throughout the operating period, unless the owner or operator can demonstrate, in accordance with Section 261.3(d) of this chapter, that the residue removed from the incinerator is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with applicable requirements of Parts 262-266 of this chapter.]

264.352-264.999 [Reserved]

(r) The following are additional location standards for facilities:

(1) In addition to the location standards set forth in 15A NCAC 13A .0109(c), the Department, in determining whether to issue a permit for a hazardous waste management facility, shall consider the risks posed by the proximity of the facility to water table levels, flood plains, water supplies, public water supply watersheds, mines, natural resources such as wetlands, endangered species habitats, parks, forests, wilderness areas, and historical sites, and population centers and shall consider whether provision has been made for adequate buffer zones. The Department shall also consider ground water travel time, soil pH, soil cation exchange capacity, soil composition and permeability, slope, climate, local land use, transportation factors such as proximity to waste generators, route, route safety, and method of transportation, aesthetic factors such as the visibility, appearance, and noise level of the facility; potential impact on air quality, existence of seismic activity and cavernous bedrock.

(2) The following minimum separation distances shall be required of all hazardous waste management facilities except that existing facilities shall be required to meet these minimum separation distances to the maximum extent feasible.

(A) All hazardous waste management facilities shall be located at least 0.25 miles from institutions including but not limited to schools, health care facilities and prisons, unless the owner or operator can demonstrate that no unreasonable risks shall be posed by the proximity of the facility.

(B) All hazardous waste treatment and storage facilities shall comply with the following separation distances: all hazardous waste shall be treated and stored a minimum of 50 feet from the property line of the facility; except that all hazardous waste with ignitable, incompatible or reactive characteristics shall be treated and stored a minimum of 200 feet from the property line of the facility if the area adjacent to the facility is zoned for any use other than industrial or is not zoned.

(C) All hazardous waste landfills, long-term storage facilities, land treatment facilities, and surface impoundments, shall comply with the following separation distances:

(i) All hazardous waste shall be located a minimum of 200 feet from the property line of the facility;

(ii) Each hazardous waste landfill, long-term storage or surface impoundment facility shall be constructed so that the bottom of the facility is 10 feet or more above the historical high ground water level. The historical high ground water level shall be determined by measuring the seasonal high ground water levels and predicting the long-term maximum high ground water level from published data on similar North Carolina topographic positions, elevations, geology, and climate; and

(iii) All hazardous waste shall be located a minimum of 1,000 feet from the zone of influence of any existing off-site ground water well used for drinking water, and outside the zone of influence of any existing or planned on-site drinking water well.

(D) Hazardous waste storage and treatment facilities for liquid waste that is classified as TC toxic, toxic, or acutely toxic and is stored or treated in tanks or containers shall not be located:

(i) in the recharge area of an aquifer which is designated as an existing sole drinking water source as defined in the Safe Drinking Water Act, Section .1424(e) [42 U.S.C. 300h-3(e)] unless an adequate secondary containment system is constructed, and after consideration of applicable factors in (r)(3) of this Rule, the owner or operator can demonstrate no unreasonable risk to public health;

(ii) within 200 feet of surface water impoundments or surface water stream with continuous flow as defined by the United States Geological Survey;

(iii) in an area that will allow direct surface or subsurface discharge to WS-I, WS-II or SA waters or a Class III Reservoir as defined in 15A NCAC 2B .0200 and 15A NCAC 18C .0102;

(iv) in an area that will allow direct surface or subsurface discharge to the watershed for a Class I or II Reservoir as defined in 15A NCAC 18C .0102;
(v) within 200 feet horizontally of a 100-year floodplain elevation;
(vi) within 200 feet of a seismically active area as defined in (c) of this Rule; and
(vii) within 200 feet of a mine, cave or cavernous bedrock.

(3) The Department may require any hazardous waste management facility to comply with greater separation distances or other protective measures necessary to avoid unreasonable risks posed by the proximity of the facility to water table levels, flood plains, water supplies, public water supply watersheds, mines, natural resources such as wetlands, endangered species habitats, parks, forests, wilderness areas, and historical sites, and population centers or to provide an adequate buffer zone. The Department may also require protective measures necessary to avoid unreasonable risks posed by the soil pH, soil cation exchange capacity, soil composition and permeability, climate, transportation factors such as proximity to waste generators, route, route safety, and method of transportation, aesthetic factors such as the visibility, appearance, and noise level of the facility, potential impact on air quality, and the existence of seismic activity and cavernous bedrock. In determining whether to require greater separation distances or other protective measures, the Department shall consider the following factors:
(A) All proposed hazardous waste activities and procedures to be associated with the transfer, storage, treatment or disposal of hazardous waste at the facility;
(B) The type of hazardous waste to be treated, stored, or disposed of at the facility;
(C) The volume of waste to be treated, stored, or disposed of at the facility;
(D) Land use issues including the number of permanent residents in proximity to the facility and their distance from the facility;
(E) The adequacy of facility design and plans for containment and control of sudden and non-sudden accidental events in combination with adequate off-site evacuation of potentially adversely impacted populations;
(F) Other land use issues including the number of institutional and commercial structures such as airports and schools in proximity to the facility, their distance from the facility, and the particular nature of the activities that take place in those structures;
(G) The lateral distance and slope from the facility to surface water supplies or to watersheds draining directly into surface water supplies;
(H) The vertical distance and type of soils and geologic conditions separating the facility from the water table;
(I) The direction and rate of flow of ground water from the sites and the extent and reliability of on-site and nearby data concerning seasonal and long-term groundwater level fluctuations;
(J) Potential air emissions including rate, direction of movement, dispersion and exposure, whether from planned or accidental, uncontrolled releases; and
(K) Any other relevant factors.

(4) The following are additional location standards for landfills, long-term storage facilities and hazardous waste surface impoundments:
(A) A hazardous waste landfill, long-term storage, or a surface impoundment facility shall not be located:
(i) In the recharge area of an aquifer which is an existing sole drinking water source;
(ii) Within 200 feet of a surface water stream with continuous flow as defined by the United States Geological Survey;
(iii) In an area that will allow direct surface or subsurface discharge to WS-I, WS-II or SA waters or a Class III Reservoir as defined in 15A NCAC 2B .0200 and 15A NCAC 18C .0102;
(iv) In an area that will allow direct surface or subsurface discharge to a watershed for a Class I or II Reservoir as defined in 15A NCAC 18C .0102;
(v) Within 200 feet horizontally of a 100-year flood hazard elevation;
(vi) Within 200 feet of a seismically active area as defined in (c) of this Rule; and
(vii) Within 200 feet of a mine, cave or cavernous bedrock.

(B) A hazardous waste landfill or long-term storage facility shall be located in highly weathered, relatively impermeable clayey formations with the following soil characteristics:

(i) The depth of the unconsolidated soil materials shall be equal to or greater than 20 feet.

(ii) The percentage of fine-grained soil material shall be equal to or greater than 30 percent passing through a number 200 sieve;

(iii) Soil liquid limit shall be equal to or greater than 30;

(iv) Soil plasticity index shall be equal to or greater than 15;

(v) Soil compacted hydraulic conductivity shall be a maximum of 1.0×10^{-7} cm/sec;

(vi) Soil Cation Exchange Capacity shall be equal to or greater than 5 milliequivalents per 100 grams;

(vii) Soil Potential Volume Change Index shall be equal to or less than 4; and

(viii) Soils shall be underlain by a competent geologic formation having a rock quality designation equal to or greater than 75 percent unless other geological conditions afford adequate protection of public health and the environment.

(C) A hazardous waste landfill or long-term storage facility shall be located in areas of low to moderate relief to the extent necessary to prevent landsliding or slippage and slumping. The site may be graded to comply with this standard.

(5) All new hazardous waste impoundments that close with hazardous waste residues left in place shall comply with the standards for hazardous waste landfills in (r)(4) of this Rule unless the applicant can demonstrate that equivalent protection of public health and environment is afforded by some other standard.

(6) The owners and operators of all new hazardous waste management facilities shall construct and maintain a minimum of two observation wells, one upgradient and one downgradient of the proposed facility; and shall establish background groundwater concentrations and monitor annually for all hazardous wastes that the owner or operator proposes to store, treat, or dispose at the facility.

(7) The owners and operators of all new hazardous waste facilities shall demonstrate that the community has had an opportunity to participate in the siting process by complying with the following:

(A) The owners and operators shall hold at least one public meeting in the county in which the facility is to be located to inform the community of all hazardous waste management activities including but not limited to: the hazardous properties of the waste to be managed; the type of management proposed for the wastes; the mass and volume of the wastes; and the source of the wastes; and to allow the community to identify specific health, safety and environmental concerns or problems expressed by the community related to the hazardous waste activities associated with the facility. The owners and operators shall provide a public notice of this meeting at least 30 days prior to the meeting. Public notice shall be documented in the facility permit application. The owners and operators shall submit as part of the permit application a complete written transcript of the meeting, all written material submitted that represents community concerns, and all other relevant written material distributed or used at the meeting. The written transcript and other written material submitted or used at the meeting shall be submitted to the local public library closest to and in the county of the proposed site with a request that the information be made available to the public.

(B) For the purposes of this Rule, public notice shall include: notification of the boards of county commissioners of the county where the proposed site is to be located and all contiguous counties in North Carolina; a legal advertisement placed in a newspaper or newspapers serving those counties; and provision of a news release to at least one newspaper, one radio station, and one TV station serving these counties. Public notice shall include the time, place, and purpose of the meetings required by this Rule.

(C) No less than 30 days after the first public meeting transcript is available at the local public library, the owners and operators shall hold at least one additional public meeting in order to attempt to resolve community concerns. The owners and operators shall provide public notice of this meeting at least 30 days prior to the meeting. Public notice shall be documented in the facility permit application. The owners and operators shall submit as part of the permit application a complete written transcript of the meeting, all written material submitted that represents community concerns, and all other relevant written material distributed or used at the meeting.

(D) The application, written transcripts of all public meetings and any additional material submitted or used at the meetings, and any additions or corrections to the application, including any responses to notices of deficiencies shall be submitted to the local library closest to and in the county of the proposed site, with a request that the information be made available to the public until the permit decision is made.

(E) The Department shall consider unresolved community concerns in the permit review process and impose final permit conditions based on sound scientific, health, safety, and environmental principles as authorized by applicable laws or rules.

(s) 40 CFR 264.552 through 264.553 (Subpart S), "Corrective Action for Solid Waste Management Units", are incorporated by reference including subsequent amendments and editions.

SUBPART S - CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS

264.552 Corrective Action Management Units (CAMU).

(a) For the purpose of implementing remedies under Section 264.101 or RCRA Section 3008(h), the Regional Administrator may designate an area at the facility as a corrective action management unit, as defined in Section 260.10, in accordance with the requirements of this section. One or more CAMUs may be designated at a facility.
  (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 constitute creation of a unit subject to minimum technology requirements.

(b) (1) The Regional Administrator may designate a regulated unit (as defined in Section 264.90(a)(2)) as a CAMU, or may incorporate a regulated unit into a CAMU, if:
    (i) The regulated unit is closed or closing, meaning it has begun the closure process under Section 264.113 or 265.113; and
    (ii) Inclusion of the regulated unit will enhance implementation of effective, protective and reliable remedial actions for the facility.
  (2) The subpart F, G, and H requirements and the unit-specific requirements of part 264 or 265 that applied to that regulated unit will continue to apply to that portion of the CAMU after incorporation into the CAMU.

(c) The Regional Administrator shall designate a CAMU in accordance with the following:
  (1) The CAMU shall facilitate the implementation of reliable, effective, protective, and cost-effective remedies;
  (2) Waste management activities associated with the CAMU shall not create unacceptable risks to humans or to the environment resulting from exposure to hazardous wastes or hazardous constituents;
  (3) The CAMU shall include uncontaminated areas of the facility, only if including such areas for the purpose of managing remediation waste is more protective that management of such wastes at contaminated areas of the facility;
  (4) Areas within the CAMU, where wastes remain in place after closure of the CAMU, shall be managed and contained so as to minimize future releases, to the extent practicable;
  (5) The CAMU shall expedite the timing of remedial activity implementation, when appropriate and practicable;
  (6) The CAMU shall enable the use, when appropriate, of treatment technologies (including innovative technologies) to enhance the long-term effectiveness of remedial actions by reducing the toxicity, mobility, or volume of wastes that will remain in place after closure of the CAMU; and
  (7) The CAMU shall, to the extent practicable, minimize the land area of the facility upon which wastes will remain in place after closure of the CAMU.

(d) The owner/operator shall provide sufficient information to enable the Regional Administrator to designate a CAMU in accordance with the criteria in Section 264.552.

(e) The Regional Administrator shall specify, in the permit or order, requirements for CAMUs to include the following:
  (1) The areal configuration of the CAMU.
  (2) Requirements for remediation waste management to include the specification of applicable design, operation and closure requirements.
  (3) Requirements for ground water monitoring that are sufficient to:
    (i) Continue to detect and to characterize the nature, extent, concentration, direction, and movement of existing releases of hazardous constituents in ground water from sources located within the CAMU; and
    (ii) Detect and subsequently characterize releases of hazardous constituents to ground water that may occur from areas of the CAMU in which wastes will remain in place after closure of the CAMU.
  (4) Closure and post-closure requirements.
    (i) Closure of corrective action management units shall:
      (A) Minimize the need for further maintenance; and
      (B) Control, minimize, or eliminate, to the extent necessary to protect human health and the environment, for areas where wastes remain in place, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated runoff, or hazardous waste decomposition products to the ground, to surface waters, or to the atmosphere.

(ii) Requirements for closure of CAMUs shall include the following, as appropriate and as deemed necessary by the Regional Administrator for a given CAMU;
  (A) Requirements for excavation, removal, treatment or containment of wastes;
  (B) For areas in which wastes will remain after closure of the CAMU, requirements for capping of such areas; and
  (C) Requirements for removal and decontamination of equipment, devices, and structures used in remediation waste management activities within the CAMU

(iii) In establishing specific closure requirements for CAMUs under Section 264.552(a), the Regional Administrator shall consider the following factors;
  (A) CAMU characteristics;
  (B) Volume of wastes which remain in place after closure;
  (C) Potential for releases from the CAMU;
  (D) Physical and chemical characteristics of the waste;
  (E) Hydrological and other relevant environmental conditions at the facility which may influence the migration of any potential or actual releases; and
  (F) Potential for exposure of humans and environmental receptors if releases were to occur from the CAMU.

(iv) Post-closure requirements as necessary to protect human health and the environment, to include, for areas where wastes will remain in place, monitoring and maintenance activities, and the frequency with which such activities shall be performed to ensure the integrity of any cap, final cover, or other containment system.

(f) The Regional Administrator shall document the rationale for designating CAMUs and shall make such documentation available to the public.

(g) Incorporation of a CAMU into an existing permit must be approved by the Regional Administrator according to the procedures for Agency initiated permit modifications under Section 270.41 of this chapter, or according to the permit modification procedures of Section 270.42 of this chapter.

(h) The designation of a CAMU does not change EPA's existing authority to address clean-up levels, media-specific points of compliance to be applied to remediation at a facility, or other remedy selection decisions.

264.553 Temporary Units (TU).

(a) For temporary tanks and container storage areas used for treatment or storage of hazardous remediation wastes, during remedial activities required under Section 264.101 or RCRA section 3008(h), the Regional Administrator may determine that a design, operating, or closure standard applicable to such units may be replaced by alternative requirements which are protective of human health and the environment.

(b) Any temporary unit to which alternative requirements are applied in accordance with paragraph (a) of this section shall be:
  (1) Located within the facility boundary; and
  (2) Used only for treatment or storage of remediation wastes.

(c) In establishing standards to be applied to a temporary unit, the Regional Administrator shall consider the following factors:
  (1) Length of time such unit will be in operation;
  (2) Type of unit;
  (3) Volumes of wastes to be managed;
  (4) Physical and chemical characteristics of the wastes to be managed in the unit;
  (5) Potential for releases from the unit;
  (6) Hydrogeological and other relevant environmental conditions at the facility which may influence the migration of any potential releases; and
  (7) Potential for exposure of humans and environmental receptors if releases were to occur from the unit.

(d) The Regional Administrator shall specify in the permit or order the length of time a temporary unit will be allowed to operate, to be no longer than a period of one year. The Regional Administrator shall also specify the design, operating, and closure requirements for the unit.

(e) The Regional Administrator may extend the operational period of a temporary unit once for no longer than a period of one year beyond that originally specified in the permit or order, if the Administrator determines that:
  (1) Continued operation of the unit will not pose a threat to human health and the environment; and
  (2) Continued operation of the unit is necessary to ensure timely and efficient implementation of remedial actions at the facility.

(f) Incorporation of a temporary unit or a time extension for a temporary unit into an existing permit shall be:
  (1) Approved in accordance with the procedures for Agency-Initiated permit modifications under Section 270.41; or

(2) Requested by the owner/operator as a Class II modification according to the procedures under Section 270.42 of this chapter.

(g) The Regional Administrator shall document the rationale for designating a temporary unit and for granting time extensions for temporary units and shall make such documentation available to the public.

(t) 40 CFR Part 264.570 through 264.575 (Subpart W), "Drip Pads", are incorporated by reference including subsequent amendments and editions.

SUBPART W – DRIP PADS

264.570 Applicability

(a) The requirements of this subpart apply to owners and operators of facilities that use new or existing drip pads to convey treated wood drippage, precipitation, and/or surface water run-off to an associated collection system. Existing drip pads are those constructed before December 6, 1990 and those for which the owner or 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. The requirement at Section 264.573(b)(3) to install a leak collection system applies only to those drip pads that are constructed after December 24, 1992 except for those constructed after December 24, 1992 for which the owner or operator has a design and has entered into binding financial or other agreements for construction prior to December 24, 1992.

(b) The owner or operator of any drip pad that is inside or under a structure that provides protection from precipitation so that neither run-off nor run-on is generated is not subject to regulation under Section 264.573(e) or Section 264.573(f), as appropriate.

(c) The requirements of this subpart are not applicable to the management of infrequent and incidental drippage in storage yards provided that:

(1) The owner or operator maintains and complies with a written contingency plan that describes how the owner or operator will respond immediately to the discharge of such infrequent and incidental drippage. At a minimum, the contingency plan must describe how the owner or operator will do the following:

(i) Clean up the drippage;

(ii) Document the cleanup of the drippage;

(iii) Retain documents regarding cleanup for three years; and

(iv) Manage the contaminated media in a manner consistent with Federal regulations.

264.571 Assessment of existing drip pad integrity.

(a) For each existing drip pad as defined in Section 264.570 of this subpart, the owner or operator must evaluate the drip pad and determine that it meets all of the requirements of this subpart, except the requirements for liners and leak detection systems of Section 264.573(b). No later than the effective date of this rule, the owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by an independent, qualified registered professional engineer that attests to the results of the evaluation. The assessment must be reviewed, updated and re-certified annually until all upgrades, repairs, or modifications necessary to achieve compliance with all of the standards of Section 264.573 of this subpart are complete. The evaluation must document the extent to which the drip pad meets each of the design and operating standards of Section 264.573 of this subpart, except the standards for liners and leak detection systems, specified in Section 264.573(b) of this subpart.

(b) The owner or operator must develop a written plan for upgrading, repairing, and modifying the drip pad to meet the requirements of Section 264.573(b) of this subpart, and submit the plan to the Regional Administrator no later than 2 years before the date that all repairs, upgrades, and modifications are complete. This written plan must describe all changes to be made to the drip pad in sufficient detail to document compliance with all the requirements of Section 264.573 of this subpart. The plan must be reviewed and certified by an independent qualified, registered professional engineer. All upgrades, repairs, and modifications must be completed in accordance with the following:

(1) For existing drip pads of known and documentable age, all upgrades, repairs, and modifications must be completed within two years of the effective date of this rule, or when the drip pad has reached 15 years of age, whichever comes later.

(2) For existing drip pads for which the age cannot be documented, within 8 years of the effective date of this rule, but if the age of the facility is greater than 7 years, all upgrades, repairs and modifications must be completed by the time the facility reaches 15 years of age or by two years after the effective date of this rule, whichever comes later.

(3) If the owner or operator believes that the drip pad will continue to meet all of the requirements of Section 264.573 of this subpart after the date upon which all upgrades, repairs and modifications must be

completed as established under paragraphs (b) (1) and (2) of this section, the owner or operator may petition the Regional Administrator for an extension of the deadline as specified in paragraph (b)(1) or (2) of this section. The Regional Administrator will grant the petition for extension based on a finding that the drip pad meets all of the requirements of Section 264.573 except those for liners and leak detection systems specified in Section 264.573(b), and that it will continue to be protective of human health and the environment.

(c) Upon completion of all upgrades, repairs, and modifications, the owner or operator must submit to the Regional Administrator or State Director, the asbuilt drawings for the drip pad together with a certification by an independent, qualified registered professional engineer attesting that the drip pad conforms to the drawings.

(d) If the drip pad is found to be leaking or unfit for use, the owner or operator must comply with the provisions of Section 264.573(m) of this subpart or close the drip pad in accordance with Section 264.575 of this subpart.

264.572 Design and Installation of new drip pads.

Owners and operators of new drip pads must ensure that the pads are designed, installed, and operated in accordance with one of the following:

(a) all of the requirements of Sections 264.573, (except 264.573(a)(4)), 264.574 and 264.575 of this subpart, or

(b) all of the requirements of Sections 264.573 (except Section 264.573(b)), 264.574 and 264.575 of this subpart.

264.573 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 treated wood drippage, rain and other waters, or solutions of drippage and water or other wastes to the associated collection system;

(3) Have a curb or berm around the perimeter;

(4) Be impermeable, e.g., concrete pads must be sealed, coated, or covered with an impermeable material such that the entire surface where drippage occurs or may run across is capable of containing such drippage and mixtures of drippage and precipitation, materials, or other wastes while being routed to an associated collection system.

(i) Have a hydraulic conductivity of less than or equal to $1x10^{-7}$ centimeters per second, e.g., existing concrete drip pads must be sealed, coated, or covered with a surface material with a hydraulic conductivity of less than or equal to $1x10^{-7}$ centimeters per second such that the entire surface where drippage occurs or may run across is capable of containing such drippage and mixtures of drippage and precipitation, materials, or other wastes while being routed to an associated collection system. This surface material must be maintained free of cracks and gaps that could adversely affect its hydraulic conductivity, and the material must be chemically compatible with the preservatives that contact the drip pad. The requirements of this provision apply only to existing drip pads and those drip pads for which the owner or operator elects to comply with Section 264.572(a) instead of Section 264.572(b).

(ii) The owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by an independent, qualified registered professional engineer that attests to the results of the evaluation. The assessment must be reviewed, updated and recertified annually. The evaluation must document the extent to which the drip pad meets the design and operating standards of this section, except for paragraph (b) of this Section.

Note: The requirement that existing drip pads be impermeable, e.g., that drip pads be sealed, coated, or covered, with an impermeable material is administratively stayed. The stay will remain in effect until October 30, 1992.

(5) Be of sufficient structural strength and thickness to prevent failure due to physical contact, climatic conditions, the stress of installation, and the stress of daily operations, e.g. variable and moving loads such as vehicle traffic, movement of wood, etc.

Note: EPA will generally consider applicable standards established by professional organizations generally recognized by the industry such as the American Concrete Institute (ACI) or the American Society of Testing and Materials (ASTM) in judging the structural integrity requirement of this paragraph.

(b) If an owner/operator elects to comply with Section 264.572(b) instead of Section 264.572(a), the drip pad must have:

(1) A synthetic liner installed below the drip pad that is designed, constructed, and installed to prevent leakage from the drip pad into the adjacent subsurface soil or groundwater or surface water at any time during the active life (including the closure period) of the drip pad. The liner must be constructed of materials that will prevent waste from being absorbed into the liner and to prevent releases into the adjacent subsurface soil or groundwater or surface water during the active life of the facility. The liner must be:
   (i) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or drip pad leakage to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation (including stresses from vehicular traffic on the drip pad);
   (ii) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression or uplift; and
   (iii) Installed to cover all surrounding earth that could come in contact with the waste or leakage; and

(2) A leakage detection system immediately above the liner that is designed, constructed, maintained and operated to detect leakage from the drip pad. The leakage detection system must be:
   (i) Constructed of materials that are:
      (A) Chemically resistant to the waste managed in the drip pad and the leakage that might be generated; and
      (B) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying materials and by any equipment used at the drip pad;
   (ii) Designed and operated to function without clogging through the scheduled closure of the drip pad; and
   (iii) Designed so that it will detect the failure of the drip pad or the presence of a release of hazardous waste or accumulated liquid at the earliest practicable time.

(3) A leakage collection system immediately above the liner that is designed, constructed, maintained and operated to collect leakage from the drip pad such that it can be removed from below the drip pad. The date, time, and quantity of any leakage collected in this system and removed must be documented in the operating log.

(c) Drip pads must be maintained such that they remain free of cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the drip pad.

Note: See Section 264.573(m) for remedial action required if deterioration or leakage is detected.

(d) The drip pad and associated collection system must be designed and operated to convey, drain, and collect liquid resulting from drippage or precipitation in order to prevent run-off.

(e) Unless protected by a structure, as described in Section 264.570(b) of this subpart, the owner or operator must design, construct, operate and maintain a run-on control system capable of preventing flow onto the drip pad during peak discharge from at least a 24-hour, 25-year storm, unless the system has sufficient excess capacity to contain any run-on that might enter the system.

(f) Unless protected by a structure or cover, as described in Section 264.570(b) of this subpart, the owner or operator must design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(g) The drip pad must be evaluated to determine that it meets the requirements of paragraphs (a) through (f) of this section and the owner or operator must obtain a statement from an independent, qualified registered professional engineer certifying that the drip pad design meets the requirements of this section.

(h) Drippage and accumulated precipitation must be removed from the associated collection system as necessary to prevent overflow onto the drip pad.

(i) The drip pad surface must be cleaned thoroughly in a manner and frequency such that accumulated residues of hazardous waste or other materials are removed, with residues being properly managed as hazardous waste, so as to allow weekly inspections of the entire drip pad surface without interference or hindrance from accumulated residues of hazardous waste or other materials on the drip pad. The owner or operator must document the date and time of each cleaning and the cleaning procedure used in the facility's operating log. The owner/operator must determine if the residues are hazardous as per 40 CFR 262.11 and if so, must manage them under parts 261-268, 270, and section 3010 of RCRA.

(j) Drip pads must be operated and maintained in a manner to minimize tracking of hazardous waste or hazardous waste constituents off the drip pad as a result of activities by personnel or equipment.

(k) After being removed from the treatment vessel, treated wood from pressure and non-pressure processes must be held on the drip pad until drippage has ceased. The owner or operator must maintain records sufficient to document that all treated wood is held on the pad following treatment in accordance with this requirement.

(l) Collection and holding units associated with run-on and run-off control systems must be emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system.

(m) Throughout the active life of the drip pad and as specified in the permit, if the owner or operator detects a condition that could lead to or has caused a release of hazardous waste, the condition must be repaired within a reasonably prompt period of time following discovery, in accordance with the following procedures:

(1) Upon detection of a condition that may have caused or has caused a release of hazardous waste (e.g., upon detection of leakage in the leak detection system), the owner or operator must:

(i) Enter a record of the discovery in the facility operating log;

(ii) Immediately remove the portion of the drip pad affected by the condition from service;

(iii) Determine what steps must be taken to repair the drip pad and clean up any leakage from below the drip pad, and establish a schedule for accomplishing the repairs;

(iv) Within 24 hours after discovery of the condition, notify the Regional Administrator of the condition and, within 10 working days' provide written notice to the Regional Administrator with a description of the steps that will be taken to repair the drip pad and clean up any leakage, and the schedule for accomplishing this work.

(2) The Regional Administrator will review the information submitted, make a determination regarding whether the pad must be removed from service completely or partially until repairs and clean up are complete, and notify the owner or operator of the determination and the underlying rationale in writing.

(3) Upon completing all repairs and clean up, the owner or operator must notify the Regional Administrator in writing and provide a certification, signed by an independent, qualified registered professional engineer, that the repairs and clean up have been completed according to the written plan submitted in accordance with paragraph (m)(1)(iv) of this section.

(n) Should a permit be necessary, the Regional Administrator will specify in the permit all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

(o) The owner or operator must maintain, as part of the facility operating log, documentation of past operating and waste handling practices. This must include identification of preservative formulations used in the past, a description of drippage management practices, and a description of treated wood storage and handling practices.

264.574 Inspections

(a) During construction or installation, liners and cover systems (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections (e.g. holes, cracks, thin spots, or foreign materials). Immediately after construction or installation, liners must be inspected and certified as meeting the requirements of Section 264.573 of this subpart by an independent qualified, registered professional engineer. The certification must be maintained at the facility as part of the facility operating record. After installation liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters.

(b) While a drip pad is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

(1) Deterioration, malfunctions or improper operation of run-on and run-off control systems;

(2) The presence of leakage in and proper functioning of leak detection system.

(3) Deterioration or cracking of the drip pad surface.

[Note: See Section 264.573(m) for remedial action required if deterioration or leakage is detected.]

264.575 Closure.

(a) At closure, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (pad, liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leakage, and manage them as hazardous waste.

(b) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in paragraph (a) of this section, the owner or operator finds that not all contaminated subsoils can be practically removed or decontaminated, he must close the facility and perform post-closure care in accordance with closure and post-closure care requirements that apply to landfills (Section 264.310). For permitted units, the requirement to have a permit continues throughout the post-closure period. In addition, for the purpose of closure, post-closure, and

financial responsibility, such a drip pad is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in subparts G and H of this part.

(c) (1) The owner or operator of an existing drip pad, as defined in Section 264.570 of this subpart, that does not comply with the liner requirements of Section 264.573(b)(1) must:

(i) Include in the closure plan for the drip pad under Section 264.112 both a plan for complying with paragraph (a) of this section and a contingent plan for complying with paragraph (b) of this section in case not all contaminated subsoils can be practicably removed at closure; and

(ii) Prepare a contingent post-closure plan under Section 264.118 of this part for complying with paragraph (b) of this section in case not all contaminated subsoils can be practicably removed at closure.

(2) The cost estimates calculated under Sections 264.112 and 264.144 of this part for closure and post-closure care of a drip pad subject to this paragraph must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under paragraph (a) of this section.

(u) 40 CFR 264.600 through 264.603 (Subpart X), "Miscellaneous Units", are incorporated by reference including subsequent amendments and editions.

SUBPART X - MISCELLANEOUS UNITS

264.600 Applicability.

The requirements in this subpart apply to owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units, except as Section 264.1 provide otherwise.

264.601 Environmental Performance Standards

A miscellaneous unit must be located, designed, constructed, operated, maintained, and closed in a manner that will ensure protection of human health and the environment. Permits for miscellaneous units are to contain such terms and provisions as necessary to protect human health and the environment, including, but not limited to, as appropriate, design and operating requirements, detection and monitoring requirements, and requirements for responses to releases of hazardous waste or hazardous constituents from the unit. Permit terms and provisions shall include those requirements of Subparts I through O and Subparts AA through CC of this part. Part 270, and Part 146 that are appropriate for the miscellaneous unit being permitted. Protection of human health and the environment includes, but is not limited to:

(a) Prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents in the ground water or subsurface environment, considering:
  (1) The volume and physical and chemical characteristics of the waste in the unit, including its potential for migration through soil, liners, or other containing structures;
  (2) The hydrologic and geologic characteristics of the unit and the surrounding area;
  (3) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground water.
  (4) The quantity and direction of ground-water flow;
  (5) The proximity to and withdrawal rates of current and potential groundwater users;
  (6) The patterns of land use in the region;
  (7) The potential for depositions or migration of waste constituents into subsurface physical structures, and into the root zone of food-chain crops and other vegetation;
  (8) The potential for health risks caused by human exposure to waste constituents; and
  (9) The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

(b) Prevention of any releases that may have adverse effects on human health or the environment due to migration of waste constituents in surface water, or wetlands or on the soil surface considering:
  (1) The volume and physical and chemical characteristics of the waste of the waste in the unit;
  (2) The effectiveness and reliability of containing, confining, and collecting systems and structures in preventing migration;
  (3) The hydrologic characteristics of the unit and the surrounding area; including the topography of the land around the unit;
  (4) The patterns of precipitation in the region;
  (5) The quantity, quality, and direction of ground-water flow;
  (6) The proximity of the unit to surface waters;
  (7) The current and potential uses of nearby surface waters and any water quality standards established for those surface waters;
  (8) The existing quality of surface waters and surface soils, including other sources of contamination and their cumulative impact on surface waters and surface soils;
  (9) The pattern of land use in the region;
  (10) The potential for health risks caused by human exposure to waste constituents; and
  (11) The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.

(c) Prevention of any release that may have adverse effects on human health or the environment due to migration of waste constituents in the air, considering:
  (1) The volume and physical and chemical characteristics of the waste in the unit, including its potential for the emission and dispersal of gases, aerosols and particulates;

(2) The effectiveness and reliability of systems and structures to reduce or prevent emissions of hazardous constituents to the air;
(3) The operating characteristics of the unit;
(4) The atmospheric, metorologic, and topographic characteristics of the unit and the surrounding area;
(5) The existing quality of the air, including other sources of contamination and their cumulative impact on the air;
(6) The potential for health risks caused by human exposure to waste constituents; and
(7) The potential for damage to domestic animals, wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents.

264.602 Monitoring, analysis, inspection, response, reporting, and corrective action.

Monitoring, testing, analytical data, inspections, response, and reporting procedures and frequencies must ensure compliance with Sections 264.601, 264.15, 264.33, 264.75, 264.76, 264.77, and 264.101 as well as meet any additional requirements needed to protect human health and the environment as specified in the permit.

264.603 Post-closure care.

A miscellaneous unit that is a disposal unit must be maintained in a manner that complies with Section 264.601 during the post-closure care period. In addition, if a treatment or storage unit has contaminated soils or ground water that cannot be completely removed or decontaminated during closure, then that unit must also meet the requirements of Section 264.601 during post closure care. The post-closure plan under 264.118 must specify the procedures that will be used to satisfy this requirement.

264.604 through 264.999 [Reserved]

(v) 40 CFR 264.1030 through 264.1049 (Subpart AA), "Air Emission Standards for Process Vents", are incorporated by reference including subsequent amendments and editions.

SUBPART AA - AIR EMISSION STANDARDS FOR PROCESS VENTS

264.1030 Applicability.

(a) The regulations in this subpart apply to owners and operators of facilities that treat, store or dispose of hazardous wastes (except as provided in Section 264.1).

(b) Except for Section 264.1034 paragraphs (d) and (e), this subpart applies to process 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, if these operations are conducted in one of the following:
   (1) A unit that is subject to the permitting requirements of part 270, or
   (2) A unit (including a hazardous waste recycling unit) that is not exempt from permitting under the provisions of 40 CFR 262.34(a) (i.e., a hazardous waste recycling unit that is not a 90-day tank or container) and that is located at a hazardous waste management facility otherwise subject to the permitting requirements of 40 CFR part 270, or
   (3) A unit that is exempt from permitting under the provisions of 40 CFR 262.34(a) (i.e., a 90-day tank or container).

(c) If the owner or operator of process vents subject to the requirements of Section 264.1032 through 264.1036 has received a permit under section 3005 of RCRA prior to December 21, 1990 the requirements of Sections 264.1032 through 264.1036 must be incorporated when the permit is reissued under Section 124.15 or reviewed under Section 270.50.

[Note: The requirements of Sections 264.1032 through 264.1036 apply to process vents on hazardous waste recycling units previously exempt under paragraph 261.6(c)(1). Other exemptions under Sections 261.4, 262.34, and 264.1(g) are not affected by these requirements.]

264.1031 Definitions

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and parts 260-266.

Air stripping operation is a desorption operation employed to transfer one or more volatile components from a liquid mixture into a gas (air) either with or without the application of heat to the liquid. Packed towers spray towers, and bubble-cap, sieve, or valve-type plate towers, are among the process configurations used for contacting the air and a liquid.

Bottoms receiver means a container or tank used to receive and collect the heavier bottoms fractions of the distillation feed stream that remain in the liquid phase.

Closed-vent system means a system that is not open to the atmosphere and that is composed of piping, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device.

Condenser means a heat-transfer device that reduces a thermodynamic fluid from its vapor phase to its liquid phase.

Connector means flanged, screwed, welded, or other joined fittings used to connect two pipelines or a pipeline and a piece of equipment. For the purposes of reporting and recordkeeping, connector means flanged fittings that are not covered by insulation or other materials that prevent location of the fittings.

Continuous recorder means a data-recording device recording an instantaneous data value at least once every 15 minutes.

Control device means an enclosed combustion device, vapor recovery system, or flare. Any device the primary function of which is the recovery or capture of solvents or other organics for use, reuse, or sale (e.g., a primary condenser on a solvent recovery unit) is not a control device.

Control device shutdown means the cessation of operation of a control device for any purpose.

Distillate receiver means a container or tank used to receive and collect liquid material (condensed) from the overhead condenser of a distillation unit and from which the condensed liquid is pumped to larger storage tanks or other process units.

Distillation operation means an operation, either batch or continuous, separating one or more feed stream(s) into two or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and vapor phase as they approach equilibrium within the distillation unit.

Double block and bleed system means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

Equipment means each valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange, and any control devices or systems required by this subpart.

Flame zone means the portion of the combustion chamber in a boiler occupied by the flame envelope.

Flow indicator means a device that indicates whether gas flow is present in a vent stream.

First attempt at repair means to take rapid action for the purpose of stopping or reducing leakage of organic material to the atmosphere using best practices.

Fractionation operation means a distillation operation or method used to separate a mixture of several volatile components of different boiling points in successive stages, each stage removing from the mixture some proportion of one of the components.

Hazardous waste management unit shutdown means a work practice or operational procedure that stops operation of a hazardous waste management unit or part of a hazardous waste management unit. An unscheduled work practice or operational procedure that stops operation of a hazardous waste management unit or part of a hazardous waste management unit for less than 24 hours is not hazardous waste management unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping operation are not hazardous waste management unit shutdowns.

Hot well means a container for collecting condensate as in a steam condenser serving a vacuum-jet or steam-jet ejector.

In gas/vapor service means that the piece of equipment contains or contacts a hazardous waste stream that is in the gaseous state at operating conditions.

In heavy liquid service means that the piece of equipment is not in gas/vapor service or in light liquid service.

In light liquid service means that the piece of equipment contains or contacts a waste stream where the vapor pressure of one or more of the components in the stream is greater than 0.3 kilopascals (kPa) at 20 degrees Celsius, the total concentration of the pure components having a vapor pressure greater than 0.3 kPa at 20 degrees Celsius is equal to or greater than 20 percent by weight, and the fluid is a liquid at operating conditions.

In situ sampling systems means nonextractive samplers or in-line samplers.

In vacuum service means that equipment is operating at an internal pressure that is at least 5 kPa below ambient pressure.

Malfunction means any sudden failure of a control device or a hazardous waste management unit or failure of a hazardous waste management unit to operate in a normal or usual manner, so that organic emissions are increased.

Open-ended valve or line means any valve, except pressure relief valves, having one side of the valve seat in contact with process fluid and one side open to the atmosphere, either directly or through open piping.

Pressure release means the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device.

Process heater means a device that transfers heat liberated by burning fuel to fluids contained in tubes, including all fluids except water that are heated to produce steam.

Process vent means any open-ended pipe or stack that is vented to the atmosphere either directly, through a vacuum-producing system, or through a tank (e.g., distillate receiver, condenser, bottoms receiver, surge control tank, separator tank, or hot well) associated with hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations.

Repaired means that equipment is adjusted, or otherwise altered to eliminate a leak.

Sensor means a device that measures a physical quantity, or a change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

Separator tank means a device used for separation of two immiscible liquids.

Solvent extraction operation means an operation or method of separation in which a solid or solution is contacted with a liquid solvent (the two being mutually insoluble) to preferentially dissolve and transfer one or more components into the solvent.

Startup means the setting in operation of a hazardous waste management unit or control device for any purpose.

Steam stripping operation means a distillation operation in which vaporization of the volatile constituents of a liquid mixture takes place by the introduction of steam directly into the charge.

Surge control tank means a large-sized pipe or storage reservoir sufficient to contain the surging liquid discharge of the process tank to which it is connected.

Thin-film evaporation operation means a distillation operation that employs a heating surface consisting of a large diameter tube that may be either straight or tapered, horizontal or vertical. Liquid is spread on the tube wall by a rotating assembly of blades that maintain a close clearance from the wall or actually ride on the film of liquid on the wall.

Vapor incinerator means any enclosed combustion device that is used for destroying organic compounds and does not extract energy in the form of steam or process heat.

Vented means discharged through an opening, typically an open-ended pipe or stack, allowing the passage of a stream of liquids, gases, or fumes into the atmosphere. The passage of liquids, gases, or fumes is caused by mechanical means such as compressors or vacuum-producing systems or by process-related means such as evaporation produced by heating and not caused by tank loading and unloading (working losses) or by natural means such as diurnal temperature changes.

264.1032 Standards: Process vents.

(a) The owner or 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) Reduce total organic emissions from all affected process vents at the facility below 1.4 kg/h (3 lb/h) and 2.8 Mg/yr (3.1 tons/yr), or
  (2) Reduce, by use of a control device, total organic emissions from all affected process vents at the facility by 95 weight percent.

(b) If the owner or operator installs a closed-vent system and control device to comply with the provisions of paragraph (a) of this section the closed vent system and control device must meet the requirements of Section 264.1033.

(c) Determinations of vent emissions and emission reductions or total organic compound concentrations achieved by add-on control devices may be based on engineering calculations or performance tests. If performance tests are used to determine vent emissions, emission reductions, or total organic compound concentrations achieved by add-on control devices, the performance tests must conform with the requirements of Section 264.1034(c)

(d) When an owner or operator and the Regional Administrator do not agree on determinations of vent emissions and/or emission reductions or total organic compound concentrations achieved by add-on control devices based on engineering calculations, the procedures in Section 264.1034(c) shall be used to resolve the disagreement.

264.1033 Standards: Closed-vent systems and control devices.

(a) (1) Owners or operators of closed-vent systems and control devices used to comply with provisions of this part shall comply with the provisions of this section.
  (2) The owner or operator of an existing facility who cannot install a closed-vent system and control device to comply with the provisions of this subpart on the effective date that the facility becomes subject to the provisions of this subpart must prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to 30 months after the effective date that the facility becomes subject to this subpart for installation and startup. All units that begin operation after December 21, 1990, must comply with the rules immediately (i.e. must have control devices installed and operating on startup of the affected unit); the 2-year implementation schedule does not apply to these units.

(b) A control device involving vapor recovery (e.g., a condenser or adsorber) shall be designed and operated to recover the organic vapors vented to it with an efficiency of 95 weight percent or greater unless the total organic emission limits of Section 264.1032(a)(1) for all affected process vents can be attained at an efficiency less than 95 weight percent.

(c) An enclosed combustion device (e.g. a vapor incinerator, boiler, or process heater) shall be designed and operated to reduce the organic emissions vented to it by 95 weight percent or greater; to achieve a total organic compound concentration of 20 ppmv. expressed as the sum of the actual compounds, not carbon equivalents, on a dry basis corrected to 3 percent oxygen; or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760 degrees Celsius. If a boiler or process heater is used as the control device, then the vent stream shall be introduced into the flame zone of the boiler or process heater.

(d) (1) A flare shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (e)(1) of this section, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
  (2) A flare shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f)(2)(iii) of this section.
  (3) A flare shall be used only if the net heating value of the gas being combusted is 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or if the net heating value of the gas being

combusted is 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (e)(2) of this section.

(4) (i) A steam-assisted or nonassisted flare shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (e)(3) of this section, less than 18.3 m/s (60 ft/s), except as provided in paragraphs (d)(4)(ii) and (iii) of this section.

(ii) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in paragraph (e)(3) of this section, equal to or greater than 18.3 m/s (60 ft/s) but less than 122 m/s (400 ft/s) is allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in paragraph (e)(3) of this section, less than the velocity, V_{max}, as determined by the method specified in paragraph (e)(4) of this section and less than 122 m/s (400 ft/s) is allowed.

(5) An air-assisted flare shall be designed and operated with an exit velocity less than the velocity, V_{max}, as determined by the method specified in paragraph (e)(5) of this section.

(6) A flare used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.

(e) (1) Reference Method 22 in 40 CFR part 60 shall be used to determine the compliance of a flare with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.

(2) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T == K\left[\sum_{i=1}^{n} C_i H_i\right]$$

where:

H_T == Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 degrees Celsius and 760 mm Hg, but the standard temperature for determining the volume corresponding to 1 mol is 20 degrees Celsius;

K == Constant, 1.74×10^{-7} (1/ppm) (g mol/scm) (MJ/kcal) where standard temperature for (g mol/scm) is 20 degrees Celsius;

C_1 == Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 in 40 CFR part 60 and measured for hydrogen and carbon monoxide by ASTM D 1946-82 (incorporated by reference as specified in Section 260.11); and

H_i == Net heat of combustion of sample component i, kcal/9 mol at 25 degrees Celsius and 760 mm Hg. The heats of combustion may be determined using ASTM D 2382-83 (incorporated by reference as specified in Section 260.11) if published values are not available or cannot be calculated.

(3) The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D in 40 CFR part 60 as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

(4) The maximum allowed velocity in m/s, V_{max}, for a flare complying with paragraph (d)(4)(iii) of this section shall be determined by the following equation:

$$\text{Log}_{10}(V_{max}) == (H_T + 28.8)/31.7$$

where:

28.8 == Constant,

31.7 == Constant,

H_T The net heating value as determined in paragraph (e)(2) of this section.

(5) The maximum allowed velocity in m/s, V_{max}, for an air-assisted flare shall be determined by the following equation:

$V_{max} == 8.706 + 0.7084 (H_T)$

where:

8.706 == Constant,

0.7084 == Constant,

H_T == The net heating value as determined in paragraph (e)(2) of this section.

(f) The owner or operator shall monitor and inspect each control device required to comply with this section to ensure proper operation and maintenance of the control device by implementing the following requirements:

(1) Install, calibrate, maintain and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow from each affected process vent to the control device at least once every hour. The flow indicator sensor shall be installed in the vent stream at the nearest feasible point to the control device inlet but before the point at which the vent streams are combined.

(2) Install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor control device operation as specified below:

(i) For a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of ± 1 percent of the temperature being monitored in °C or ±0.5°C, whichever is greater. The temperature sensor shall be installed at a location in the combustion chamber downstream of the combustion zone.

(ii) For a catalytic vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature at two locations and have an accuracy of ±1 percent of the temperature being monitored in °C or ±0.5 °C, whichever is greater. One temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.

(iii) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.

(iv) For a boiler or process heater having a design heat input capacity less than 44 MW, a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of ±1 percent of the temperature being monitored in °C or ±0.5 °C, whichever is greater. The temperature sensor shall be installed at a location in the furnace downstream of the combustion zone.

(v) For a boiler or process heater having a design heat input capacity greater than or equal to 44 MW, a monitoring device equipped with a continuous recorder to measure a parameter(s) that indicates good combustion operating practices are being used.

(vi) For a condenser, either:

(A) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the condenser, or

(B) A temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature with an accuracy of ±1 percent of the temperature being monitored in degrees Celsius (°C) or ±0.5 °C, whichever is greater. The temperature sensor shall be installed at a location in the exhaust vent stream from the condenser exit (i.e., product side).

(vii) For a carbon adsorption system that regenerates the carbon bed directly in the control device such as a fixed-bed carbon adsorber, either:

(A) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the carbon bed, or

(B) A monitoring device equipped with a continuous recorder to measure a parameter that indicates the carbon bed is regenerated on a regular, predetermined time cycle.

(3) Inspect the readings from each monitoring device required by paragraphs (f)(1) and (2) of this section at least once each operating day to check control device operation and, if necessary, immediately implement the corrective measures necessary to ensure the control device operates in compliance with the requirements of this section.

(g) An owner or operator using a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon at a regular, predetermined time interval that is no longer than the carbon service life established as a requirement of Section 264.1035(b)(4(iii(F).

(h) An owner or operator using a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon on a regular basis by using one of the following procedures:

(1) Monitor the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system on a regular schedule, and replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated. The monitoring frequency shall be daily or at an interval no greater than 20 percent of the time required to consume the total carbon working capacity established as a requirement of Section 264.1035(b)(4(iii)(G), whichever is longer.

(2) Replace the existing carbon with fresh carbon at a regular, predetermined time interval that is less than the design carbon replacement interval established as a requirement of Section 264.1035(b)(4)(iii)(G).

(i) An alternative operational or process parameter may be monitored if it can be demonstrated that another parameter will ensure that the control device is operated in conformance with these standards and the control device's design specifications.

(j) An owner or operator of an affected facility seeking to comply with the provisions of this part by using a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system is required to develop documentation including sufficient information to describe the control device operation and identify the process parameter or parameters that indicate proper operation and maintenance of the control device.

(k) A closed-vent system shall meet either of the folowing design requirements:

(1) A closed-vent system shall be designed to operate with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background as determined by the procedure in Section 264.1034(b) of this subpart, and by visual inspections; or

(2) A closed-vent system shall be designed to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.

(3) Detectable emissions, as indicated by an instrument reading greater than 500 ppm and visual inspections, shall be controlled as soon as practicable, but not later than 15 calendar days after the emission is detected.

(4) A first attempt at repair shall be made no later than 5 calendar days after the emission is detected.

(l) The owner or operator shall monitor and inspect each closed-vent system required to comply with this section to ensure proper operation and maintenance of the closed-vent system by implementing the following requirements:

(1) Each closed-vent system that is used to comply with paragraph (k)(1) of this section shall be inspected and monitored in accordance with the following requirements:

(i) An initial leak detection monitoring of the closed-vent system shall be conducted by the owner or operator on or before the date that the system becomes subject to this section. The owner or operator shall monitor the closed-vent system components and connections using the procedures specified in Section 264.1034(b) of this subpart to demonstrate that the closed-vent system operates with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background.

(ii) After initial leak detection monitoring required in paragraph (l)(1)(i) of this section, the owner or operator shall inspect and monitor the closed-vent system as follows:

(A) Closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange) shall be visually inspected at least once per year to check for defects that could result in air pollutant emissions. The owner or operator shall monitor a component or connection using the procedures specified in Section 264.1034(b) of this subpart to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced (e.g., a section of damaged hard piping is replaced with new hard piping) or the connection is unsealed (e.g., a flange is unbolted).

(B) Closed-vent system components or connections other than those specified in paragraph (l)(1)(ii)(A) of this section shall be monitored annually and at other times as requested by the Regional Administrator, except as provided for in paragraph (o) of this section, using the

procedures specified in Section 264.1034(b) of this subpart to demonstrate that the components or connections operate with no detectable emissions.

(iii) In the event that a defect or leak is detected, the owner or operator shall repair the defect or leak in accordance with the requirements of paragraph (1)(3) of this section.

(iv) The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in Section 264.1035 of this subpart.

(2) Each closed-vent system that is used to comply with paragraph (k)(2) of this section shall be inspected and monitored in accordance with the following requirements:

(i) The closed-vent system shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork or piping or loose connections.

(ii) The owner or operator shall perform an initial inspection of the closed-vent system on or before the date that the system becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year.

(iii) In the event that a defect or leak is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (l)(3) of this section.

(iv) The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in Sec. 264.1035 of this subpart.

(3) The owner or operator shall repair all detected defects as follows:

(i) Detectable emissions, as indicated by visual inspection, or by an instrument reading greater than 500 ppmv above background, shall be controlled as soon as practicable, but not later than 15 calendar days after the emission is detected, except as provided for in paragraph (l)(3)(iii) of this section.

(ii) A first attempt at repair shall be made no later than 5 calendar days after the emission is detected.

(iii) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

(iv) The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in Sec. 264.1035 of this subpart.

(m) Closed-vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

(n) The owner or operator using a carbon adsorption system to control air pollutant emissions shall document that all carbon that is a hazardous waste and that is removed from the control device is managed in one of the following manners, regardless of the average volatile organic concentration of the carbon:

(1) Regenerated or reactivated in a thermal treatment unit that meets one of the following:

(i) The owner or operator of the unit has been issued a final permit under 40 CFR part 270 which implements the requirements of subpart X of this part; or

(ii) The unit is equipped with and operating air emission controls in accordance with the applicable requirements of subparts AA and CC of either this part or of 40 CFR part 265; or

(iii) The unit is equipped with and operating air emission controls in accordance with a national emission standard for hazardous air pollutants under 40 CFR part 61 or 40 CFR part 63.

(2) Incinerated in a hazardous waste incinerator for which the owner or operator either:

(i) Has been issued a final permit under 40 CFR part 270 which implements the requirements of subpart O of this part; or

(ii) Has designed and operates the incinerator in accordance with the interim status requirements of 40 CFR part 265, subpart O.

(3) Burned in a boiler or industrial furnace for which the owner or operator either:

(i) Has been issued a final permit under 40 CFR part 270, which implements the requirements of 40 CFR part 266, subpart H; or

(ii) Has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of 40 CFR part 266, subpart H.

(o) Any components of a closed-vent system that are designated, as described in Sec. 264.1035(c)(9) of this subpart, as unsafe to monitor are exempt from the requirements of paragraph (l)(1)(ii)(B) of this section if:

(1) The owner or operator of the closed-vent system determines that the components of the closed-vent system are unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (l)(1)(ii)(B) of this section; and

(2) The owner or operator of the closed-vent system adheres to a written plan that requires monitoring the closed-vent system components using the procedure specified in paragraph (l)(1)(ii)(B) of this section as frequently as practicable during safe-to-monitor times.

264.1034 Test methods and procedures.

(a) Each owner or operator subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section.

(b) When a closed-vent system is tested for compliance with no detectable emissions, as required in Section 264.1033(l) of this subpart, the test shall comply with the following requirements:
  (1) Monitoring shall comply with Reference Method 21 in 40 CFR part 60.
  (2) The detection instrument shall meet the performance criteria of Reference Method 21.
  (3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.
  (4) Calibration gases shall be:
    (i) Zero air (less than 10 ppm of hydrocarbon in air).
    (ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.
  (5) The background level shall be determined as set forth in Reference Method 21.
  (6) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.
  (7) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(c) Performance tests to determine compliance with Section 264.1032(a) and with the total organic compound concentration limit of Section 264.1033(c) shall comply with the following:
  (1) Performance tests to determine total organic compound concentrations and mass flow rates entering and exiting control devices shall be conducted and data reduced in accordance with the following reference methods and calculation procedures:
    (i) Method 2 in 40 CFR part 60 for velocity and volumetric flow rate.
    (ii) Method 18 in 40 CFR part 60 for organic content.
    (iii) Each performance test shall consist of three separate runs; each run conducted for at least 1 hour under the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. For the purpose of determining total organic compound concentrations and mass flow rates, the average of results of all runs shall apply. The average shall be computed on a time-weighted basis.
    (iv) Total organic mass flow rates shall be determined by the following equation:

$$E_h == Q_{2sd} \left\{ \sum_{i==1}^{n} C_i MW_i \right\} [0.0416] [10^{-6}]$$

where:

E_h == Total organic mass flow rate, kg/h;

Q_{sd} == Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h;

n == Number of organic compounds in the vent gas;

C_i == Organic concentration in ppm, dry basis, of compound i in the vent gas, as determined by Method 18;

MW_i == Molecular weight of organic compound i in the vent gas, kg/kg-mol;

0.0416 == Conversion factor for molar volume, kg-mol/m^3(@293 K and 760 mm Hg);

10^{-6} == Conversion from ppm, ppm^{-1}.

    (v) The annual total organic emission rate shall be determined by the following equation:

E_A==$(E_h)(H)$

where:

E_A== Total organic mass emission rate, kg/y;

E_h== Total organic mass flow rate for the process vent, kg/h;

H== Total annual hours of operations for the affected unit, h.

(vi) Total organic emissions from all affected process vents at the facility shall be determined by summing the hourly total organic mass emission rates (E_h as determined in paragraph (c)(1)(iv) of this section) and by summing the annual total organic mass emission rates (E_A, as determined in paragraph (c)(1)(v) of this section) for all affected process vents at the facility.

(2) The owner or operator shall record such process information as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

(3) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for the test methods specified in paragraph (c)(1) of this section.

(ii) Safe sampling platform(s).

(iii) Safe access to sampling platform(s).

(iv) Utilities for sampling and testing equipment.

(4) For the purpose of making compliance determinations, the time-weighted average of the results of the three runs shall apply: In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner or operator's control, compliance may, upon the Regional Administrator's approval, be determined using the average of the results of the two other runs.

(d) To show that a process vent associated with a hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation is not subject to the requirements of this subpart, the owner or operator must make an initial determination that the time-weighted, annual average total organic concentration of the waste managed by the waste management unit is less than 10 ppmw using one of the following two methods:

(1) Direct measurement of the organic concentration of the waste using the following procedures:

(i) The owner or operator must take a minimum of four grab samples of waste for each waste stream managed in the affected unit under process conditions expected to cause the maximum waste organic concentration.

(ii) For waste generated onsite, the grab samples must be collected at a point before the waste is exposed to the atmosphere such as in an enclosed pipe or other closed system that is used to transfer the waste after generation to the first affected distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation. For waste generated offsite, the grab samples must be collected at the inlet to the first waste management unit that receives the waste provided the waste has been transferred to the facility in a closed system such as a tank truck and the waste is not diluted or mixed with other waste.

(iii) Each sample shall be analyzed and the total organic concentration of the sample shall be computed using Method 9060 or 8240 of SW-846 (incorporated by reference under Section 260.11).

(iv) The arithmetic mean of the results of the analyses of the four samples shall apply for each waste stream managed in the unit in determining the time-weighted, annual average total organic concentration of the waste. The time-weighted average is to be calculated using the annual quantity of each waste stream processed and the mean organic concentration of each waste stream managed in the unit.

(2) Using knowledge of the waste to determine that its total organic concentration is less than 10 ppmw. Documentation of the waste determination is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has preciously been demonstrated by direct measurement to generate a waste stream having a total organic content less than 10 ppmw, or prior speciation analysis

results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.

(e) The determination that distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations manage hazardous wastes with time-weighted, annual average total organic concentrations less than 10 ppmw shall be made as follows:
   (1) By the effective date that the facility becomes subject to the provisions of this subpart or by the date when the waste is first managed in a waste management unit, whichever is later, and
   (2) For continuously generated waste, annually, or
   (3) Whenever there is a change in the waste being managed or a change in the process that generates or treats the waste.

(f) When an owner or operator and the Regional Administrator do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation manages a hazardous waste with organic concentrations of at least 10 ppmw based on knowledge of the waste, the procedures in Method 8240 may be used to resolve the dispute.

264.1035 Recordkeeping requirements.

(a) (1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.
   (2) An owner or operator of more than one hazardous waste management unit subject to the provisions of this subpart may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

(b) Owners and operators must record the following information in the facility operating record:
   (1) For facilities that comply with the provisions of Section 264.1033(a)(2), an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The schedule must also include a rationale of why the installation cannot be completed at an earlier date. The implementation schedule must be in the facility operating record by the effective date that the facility becomes subject to the provisions of this subpart.
   (2) Up-to-date documentation of compliance with the process vent standards in Section 264.1032, including:
      (i) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility (i.e., the total emissions for all affected vents at the facility), and the approximate location within the facility of each affected unit (e.g., identify the hazardous waste management units on a facility plot plan).
      (ii) Information and data supporting determinations of vent emissions and emission reductions achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions must be made using operating parameter values (e.g., temperatures, flow rates, or vent stream organic compounds and concentrations) that represent the conditions that result in maximum organic emissions, such as when the waste management unit is operating at the highest load or capacity level reasonably expected to occur. If the owner or operator takes any action (e.g., managing a waste of different composition or increasing operating hours of affected waste management units) that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required.
   (3) Where an owner or operator chooses to use test data to determine the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan. The test plan must include:
      (i) A description of how it is determined that the planned test is going to be conducted when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. This shall include the estimated or design flow rate and organic content of each vent stream and define the acceptable operating ranges of key process and control device parameters during the test program.
      (ii) A detailed engineering description of the closed-vent system and control device including:
         (A) Manufacturer's name and model number of control device.
         (B) Type of control device.
         (C) Dimensions of the control device.
         (D) Capacity.
         (E) Construction materials.

(iii) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(4) Documentation of compliance with Section 264.1033 shall include the following information:

(i) A list of all information references and sources used in preparing the documentation.

(ii) Records, including the dates, of each compliance test required by Section 264.1033(k)

(iii) If engineering calculations are used a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions" (incorporated by reference as specified in Section 260.11) or other engineering texts acceptable to the Regional Administrator that present basic control device design information.

Documentation provided by the control device manufacturer or vendor that describes the control device design in accordance with paragraphs (b)(4)(iii)(A) through (b)(4)(iii)(G) of this section may be used to comply with this requirement. The design analysis shall address the vent stream characteristics and control device operation parameters as specified below.

(A) For a thermal vapor incinerator, and design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

(B) For a catalytic vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(C) For a boiler or process heater, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average flame zone temperatures, combustion zone residence time, and description of method and location where the vent stream is introduced into the combustion zone.

(D) For a flare, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also consider the requirements specified in Section 264.1033(d).

(E) For a condenser, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and design average temperatures of the coolant fluid at the condenser inlet and outlet.

(F) For a carbon adsorption system such as a fixed-bed adsorber that regenerates the carbon bed directly onsite in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total stream flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling/drying cycles, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.

(G) For a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

(iv) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur.

(v) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of 95 percent or greater unless the total organic concentration limit of Section 264.1032(a) is achieved at an efficiency less than 95 weight percent or the total organic emission limits of Section 264.1032(a) for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than 95 weight percent.

A statement provided by the control device manufacturer or vendor certifying that the control equipment meets the design specifications may be used to comply with this requirement.

(vi) If performance tests are used to demonstrate compliance, all test results.

(c) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of this part shall be recorded and kept up-to-date in the facility operating record. The information shall include:

(1) Description and date of each modification that is made to the closed-vent system or control device design.

(2) Identification of operating parameter, description of monitoring device, and diagram of monitoring sensor location or locations used to comply with Section 264.1033(f)(1) and (f)(2).

(3) Monitoring, operating, and inspection information required by paragraphs (f) through (k) of Section 264.1033.

(4) Date, time, and duration of each period that occurs while the control device is operating when any monitored parameter exceeds the value established in the control device design analysis as specified below:

(i) For a thermal vapor incinerator designed to operate with a minimum residence time of 0.50 second at a minimum temperature of 760 degrees Celsius period when the combustion temperature is below 760 degrees Celsius.

(ii) For a thermal vapor incinerator designed to operate with an organic emission reduction efficiency of 95 weight percent or greater period when the combustion zone temperature is more than 28 degrees Celsius below the design average combustion zone temperature established as a requirement of Paragraph (b)(4)(iii)(A) of this section.

(iii) For a catalytic vapor incinerator, period when:

(A) Temperature of the vent stream at the catalyst bed inlet is more than 28 degrees Celsius below the average temperature of the inlet vent stream established as a requirement of paragraph (b)(4)(iii)(B) of this section, or

(B) Temperature difference across the catalyst bed is less than 80 percent of the design average temperature difference established as a requirement of paragraph (b)(4)(iii)(B) of this section.

(iv) For a boiler or process heater, period when:

(A) Flame zone temperature is more than 28 degrees Celsius below the design average flame zone temperature established as a requirement of paragraph (b)(4)(iii)(C) of this section, or

(B) Position changes where the vent stream is introduced to the combustion zone from the location established as a requirement of paragraph (b)(4)(iii)(C) of this section.

(v) For a flare, period when the pilot flame is not ignited.

(vi) For a condenser that complies with Section 264.1033(f)(2)(vi)(A), period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the condenser are more than 20 percent greater than the design outlet organic compound concentration level established as requirement of paragraph (b)(4)(iii)(E) of this section.

(vii) For a condenser that complies with Section 264.1033(f)(2)(vi)(B), period when:

(A) Temperature of the exhaust vent stream from the condenser is more than 6 degrees Celsius above the design average exhaust vent stream temperature established as a requirement of paragraph (b)(4)(iii)(E) of this section; or

(B) Temperature of the coolant fluid exiting the condenser is more than 6 degrees Celsius above the design average coolant fluid temperature at the condenser outlet established as a requirement of paragraph (b)(4)(iii)(E) of this section.

(viii) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device and complies with Section 264.1033(f)(2)(vii)(A), period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the carbon bed are more than 20 percent greater than the design exhaust vent stream organic compound concentration level established as a requirement of paragraph (b)(4)(iii)(F) of this section.

(ix) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device and complies with Section 264.1033(f)(2)(vii)(B), period when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time established as a requirement of paragraph (b)(4)(iii)(F) of this section.

(5) Explanation for each period recorded under paragraph (4) of the cause for control device operating parameter exceeding the design value and the measures implemented to correct the control device operation.

(6) For a carbon adsorption system operated subject to requirements specified in Section 264.1033(g) or Section 264.1033(h)(2), date when existing carbon in the control device is replaced with fresh carbon.

(7) For a carbon adsorption system operated subject to requirements specified in Section 264.1033(h)(1), a log that records:
  (i) Date and time when control device is monitored for carbon breakthrough and the monitoring device reading.
  (ii) Date when existing carbon in the control device is replaced with fresh carbon.
(8) Date of each control device startup and shutdown.
(9) An owner or operator designating any components of a closed-vent system as unsafe to monitor pursuant to Sec. 264.1033(o) of this subpart shall record in a log that is kept in the facility operating record the identification of closed-vent system components that are designated as unsafe to monitor in accordance with the requirements of Sec. 264.1033(o) of this subpart, an explanation for each closed-vent system component stating why the closed-vent system component is unsafe to monitor, and the plan for monitoring each closed-vent system component.
(10) When each leak is detected as specified in Sec. 264.1033(l) of this subpart, the following information shall be recorded:
  (i) The instrument identification number, the closed-vent system component identification number, and the operator name, initials, or identification number.
  (ii) The date the leak was detected and the date of first attempt to repair the leak.
  (iii) The date of successful repair of the leak.
  (iv) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonrepairable.
  (v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
    (A) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.
    (B) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(d) Records of the monitoring, operating, and inspection information required by paragraphs (c)(3) through (c))10) of this section shall be maintained by the owner or operator for at least 3 years following the date of each occurrence, measurement, maintenance, corrective action, or record.

(e) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the Regional Administrator will specify the appropriate recordkeeping requirements.

(f) Up-to-date information and data used to determine whether or not a process vent is subject to the requirements in Section 264.1032 including supporting documentation as required by Section 264.1034(d)(2) when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used, shall be recorded in a log that is kept in the facility operating record.

264.1036 Reporting requirements.

(a) A semiannual report shall be submitted by owners and operators subject to the requirements of this subpart to the Regional Administrator by dates specified by the Regional Administrator. The report shall include the following information:
  (1) The Environmental Protection Agency identification number, name, and address of the facility.
  (2) For each month during the semiannual reporting period, dates when the control device exceeded or operated outside of the design specifications as defined in Section 264.1035(c)(4) and as indicated by the control device monitoring required by Section 264.1033(f) and such exceedances were not corrected within 24 hours, or that a flare operated with visible emissions as defined in Section 264.1033(d) and as determined by Method 22 monitoring, the duration and cause of each exceedance or visible emissions, and any corrective measures taken.

(b) If, during the semiannual reporting period, the control device does not exceed or operate outside of the design specifications as defined in Section 264.1035(c)(4) for more than 24 hours or a flare does not operate with visible emissions as defined in Section 264.1033(d), a report to the Regional Administrator is not required.

Sections 264.1037-264.1049 (Reserved).

(w) 40 CFR 264.1050 through 264.1079 (Subpart BB), "Air Emission Standards for Equipment Leaks", are incorporated by reference including subsequent amendments and editions.

SUBPART BB - AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS

264.1050 Applicability.

(a) The regulations in this subpart apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes (except as provided in Section 264.1).
(b) Except as provided in Section 264.1064(k), this subpart applies to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight that are managed in one of the following:
  (1) A unit that is subject to the permitting requirements of part 270, or
  (2) A unit (including a hazardous waste recycling unit) that is not exempt from permitting under the provisions of 40 CFR 262.34(a) (i.e., a hazardous waste recycling unit that is not a "90-day" tank or container) and that is located at a hazardous waste management facility otherwise subject to the permitting requirements of 40 CFR part 270, or
  (3) A unit that is exempt from permitting under the provisions of 40 CFR 262.34(a) (i.e., a "90-day" tank or container).
(c) If the owner or operator of equipment subject to the requirements of Sections 264.1052 through 264.1065 has received a permit under Section 3005 of RCRA prior to December 21, 1990, the requirements of Sections 264.1052 through 264.1065 must be incorporated when the permit is reissued under Section 124.15 or reviewed under Section 270.50.
(d) Each piece of equipment to which this subpart applies shall be marked in such a manner that it can be distinguished readily from other pieces of equipment.
(e) Equipment that is in vacuum service is excluded from the requirements of Section 264.1052 to Section 264.1060 if it is identified as required in Section 264.1064(g)(5).
(f) Equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for a period of less than 300 hours per calendar year is excluded from the requirements of Sections 264.1052 through 264.1060 of this subpart if it is identified as required in Section 264.1064(g)(6) of this subpart.

[Note: The requirements of Sections 264.1052 through 264.1065 apply to equipment associated with hazardous waste recycling units previously exempt under Section 261.6(c)(1). Other exemptions under Sections 261.4, and 264.1(g) are not affected by these requirements.]

264.1051 Definitions.

(a) As used in this subpart, all terms shall have the meaning given them in Section 264.1031, the Act, and parts 260-266.

264.1052 Standards: Pumps in light liquid service.

(a) (1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in Section 264.1063(b), except as provided in paragraphs (d), (e), and (f) of this section.
  (2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.
(b) (1) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
  (2) If there are indications of liquids dripping from the pump seal, a leak is detected.
(c) (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 264.1059.
  (2) A first attempt at repair (e.g., tightening the packing gland) shall be made no later than 5 calendar days after each leak is detected.
(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a) of this section, provided the following requirements are met:
  (1) Each dual mechanical seal system must be:
    (i) Operated with the barrier fluid at a pressure that is at all times greater than the pump-stuffing box pressure, or

(ii) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of Section 264.1060, or

(iii) Equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to the atmosphere.

(2) The barrier fluid system must not be a hazardous waste with organic concentrations 10 percent or greater by weight.

(3) Each barrier fluid system must be equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each pump must be checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(5) (i) Each sensor as described in paragraph (d)(3) of this section must be checked daily or be equipped with an audible alarm that must be checked monthly to ensure that it is functioning properly.

(ii) The owner or operator must determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(6) (i) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in paragraph (d)(5)(ii) of this section, a leak is detected.

(ii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 264.1059.

(iii) A first attempt at repair (e.g., relapping the seal) shall be made no later than 5 calendar days after each leak is detected.

(e) Any pump that is designated, as described in Section 264.1064(g)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) of this section if the pump meets the following requirements:

(1) Must have no externally actuated shaft penetrating the pump housing.

(2) Must operate with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in Section 264.1065(c).

(3) Must be tested for compliance with paragraph (e)(2 of this section initially upon designation, annually, and at other times as requested by the Regional Administrator.

(f) If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of Section 264.1060, it is exempt from the requirements of paragraphs (a) through (e) of this section.

264.1053 Standards: Compressors.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of total organic emissions to the atmosphere, except as provided in paragraphs (h) and (i) of this section.

(b) Each compressor seal system as required in paragraph (a) of this section shall be:

(1) Operated with the barrier fluid at a pressure that is at all times greater than the compressor stuffing box pressure, or

(2) Equipped with a barrier fluid system that is connected by a closed-vent system to a control device that complies with the requirements of Section 264.1060, or

(3) Equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to atmosphere.

(c) The barrier fluid must not be a hazardous waste with organic concentrations 10 percent or greater by weight.

(d) Each barrier fluid system as described in paragraphs (a) through (c) of this section shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e) (1) Each sensor as required in paragraph (d) of this section shall be checked daily or shall be equipped with an audible alarm that must be checked monthly to ensure that it is functioning properly unless the compressor is located within the boundary of an unmanned plant site, in which case the sensor must be checked daily.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under paragraph (e)(2) of this section, a leak is detected.

(g) (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 264.1059.

(2) A first attempt at repair (e.g., tightening the packing gland) shall be made no later than 5 calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of paragraphs (a) and (b) of this section if it is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal to a control device that complies with the requirements of Section 264.1060, except as provided in paragraph (i) of this section.

(i) Any compressor that is designated, as described in Section 264.1064(g)(2), for no detectable emissions as indicated by an instrument reading of less than 500 ppm above background is exempt from the requirements of paragraphs (a) through (h) of this section if the compressor:
  (1) Is determined to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Section 264.1063(c).
  (2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times as requested by the Regional Administrator.

264.1054 Standards: Pressure relief devices in gas/vapor service.

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Section 264.1063(c).

(b) (1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in Section 264.1059.
  (2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Section 264.1063(c).

(c) Any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in Section 264.1060 is exempt from the requirements of paragraphs (a) and (b) of this section.

264.1055 Standards: Sampling connecting systems.

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system. This system shall collect the sample purge for return to the process or for routing to the appropriate treatment system. Gases displaced during filling of the sample container are not required to be collected or captured.

(b) Each closed-purge system, closed-loop, or closed-vent system as required in paragraph (a) of this section shall meet one of the following requirements:
  (1) Return the purged process fluid directly to the process line;
  (2) Collect and recycle the purged process fluid; or
  (3) Be designed and operated to capture and transport all the purged process fluid to a waste management unit that complies with the applicable requirements of Section 264.1084 therough Section 264.1086 of this subpart or a control device that complies with the requirements of Section 264.1060 of this subpart.

(c) *In situ* sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

264.1056 Standards: Open-ended valves or lines.

(a) (1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve.
  (2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring hazardous waste stream flow through the open-ended valve or line.

(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the hazardous waste stream end is closed before the second valve is closed.

(c) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) of this section at all other times.

264.1057 Standards: Valves in gas/vapor service or in light liquid service.

(a) Each valve in gas/vapor or light liquid service shall be monitored monthly to detect leaks by the methods specified in Section 264.1063(b) and shall comply with paragraphs (b) through (e) of this section, except as provided in paragraphs (f), (g), and (h) of this section, and Sections 264.1061 and 264.1062.
(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
(c) (1) Any valve for which a leak is not detected for two successive months may be monitored the first month of every succeeding quarter, beginning with the next quarter, until a leak is detected.
(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for two successive months.
(d) (1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in Section 264.1059.
(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
(e) First attempts at repair include, but are not limited to, the following best practices where practicable:
(1) Tightening of bonnet bolts.
(2) Replacement of bonnet bolts.
(3) Tightening of packing gland nuts.
(4) Injection of lubricant into lubricated packing.
(f) Any valve that is designated, as described in Section 264.1064(g)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (a) of this section if the valve:
(1) Has no external actuating mechanism in contact with the hazardous waste stream.
(2) Is operated with emissions less than 500 ppm above background as determined by the method specified in Section 264.1063(c).
(3) Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times as requested by the Regional Administrator.
(g) Any valve that is designated, as described in Section 264.1064(h)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) of this section if:
(1) The owner or operator of the valve determines that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section.
(2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.
(h) Any valve that is designated, as described in Section 264.1064(h)(2), a difficult to monitor valve is exempt from the requirements of paragraph (a) of this section if:
(1) The owner or operator of the valve determines that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.
(2) The hazardous waste management unit within which the valve is located was in operation before June 21, 1990.
(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

264.1058 Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors.

(a) Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors shall be monitored within 5 days by the method specified in Section 264.1063(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.
(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
(c) (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 264.1059.
(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.
(d) First attempts at repair include, but are not limited to, the best practices described under Section 264.1057(e).
(e) Any connector that is inaccessible or is ceramic or ceramic-lined (e.t., porcelain, glass, or glass-lined) is exempt from the monitoring requirements of paragraph (a) of this section and from the recordkeeping requirements of Section 264.1064 of this subpart.

264.1059 Standards: Delay of repair.

(a) Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a hazardous waste management unit shutdown. In such a case, repair of this equipment shall occur before the end of the next hazardous waste management unit shutdown.
(b) Delay of repair of equipment for which leaks have been detected will be allowed for equipment that is isolated from the hazardous waste management unit and that does not continue to contain or contact hazardous waste with organic concentrations at least 10 percent by weight.
(c) Delay of repair for valves will be allowed if:
    (1) The owner or operator determines that emissions of purged material resulting from immediate repair are greater than the emissions likely to result from delay of repair.
    (2) When repair procedures are affected, the purged material is collected and destroyed or recovered in a control device complying with Section 264.1060.
(d) Delay of repair for pumps will be allowed if:
    (1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system.
    (2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.
(e) Delay of repair beyond a hazardous waste management unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the hazardous waste management unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next hazardous waste management unit shutdown will not be allowed unless the next hazardous waste management unit shutdown occurs sooner than 6 months after the first hazardous waste management unit shutdown.

264.1060 Standards: Closed-vent systems and control devices.

Owners or operators of closed-vent systems and control devices shall comply with the provisions of Section 264.1033.

264.1061 Alternative standards for valves in gas/vapor service or in light liquid service: percentage of valves allowed to leak.

(a) An owner or operator subject to the requirements of Section 264.1057 may elect to have all valves within a hazardous waste management unit comply with an alternative standard that allows no greater than 2 percent of the valves to leak.
(b) The following requirements shall be met if an owner or operator decides to comply with the alternative standard of allowing 2 percent of valves to leak:
    (1) An owner or operator must notify the Regional Administrator that the owner or operator has elected to comply with the requirements of this section.
    (2) A performance test as specified in paragraph (c) of this section shall be conducted initially upon designation, annually, and at other times requested by the Regional Administrator.
    (3) If a valve leak is detected, it shall be repaired in accordance with Section 264.1057(d) and (e).
(c) Performance tests shall be conducted in the following manner:
    (1) All valves subject to the requirements in Section 264.1057 within the hazardous waste management unit shall be monitored within 1 week by the methods specified in Section 264.1063(b).
    (2) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
    (3) The leak percentage shall be determined by dividing the number of valves subject to the requirements in Section 264.1057 for which leaks are detected by the total number of valves subject to the requirements in Section 264.1057 within the hazardous waste management unit.
(d) If an owner or operator decides to comply with this section no longer, the owner or operator must notify the Regional Administrator in writing that the work practice standard described in Section 264.1057(a) through (e) will be followed.

264.1062 Alternative standards for valves in gas/vapor service or in light liquid service: skip period leak detection and repair.

(a) (1) An owner or operator subject to the requirements of Section 264.1057 may elect for all valves within a hazardous waste management unit to comply with one of the alternative work practices specified in paragraphs (b) (2) and (3) of this section.

(2) An owner or operator must notify the Regional Administrator before implementing one of the alternative work practices.

(b) (1) An owner or operator shall comply with the requirements for valves, as described in Section 264.1057, except as described in paragraphs (b)(2) and (b)(3) of this section.

(2) After two consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2 percent, an owner or operator may begin to skip one of the quarterly leak detection periods for the valves subject to the requirements in Section 264.1057.

(3) After five consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2 percent, an owner or operator may begin to skip three of the quarterly leak detection periods for the valves subject to the requirements in Section 264.1057.

(4) If the percentage of valves leaking is greater than 2 percent, the owner or operator shall monitor monthly in compliance with the requirements in Section 264.1057, but may again elect to use this section after meeting the requirements of Section 264.1057(c)(1).

264.1063 Test methods and procedures.

(a) Each owner or operator subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section.

(b) Leak detection monitoring, as required in Sections 264.1052-264.1062, shall comply with the following requirements:

(1) Monitoring shall comply with Reference Method 21 in 40 CFR part 60.

(2) The detection instrument shall meet the performance criteria of Reference Method 21.

(3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.

(4) Calibration gases shall be:

(i) Zero air (less than 10 ppm of hydrocarbon in air).

(ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.

(5) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(c) When equipment is tested for compliance with no detectable emissions, as required in Sections 264.1052(e), 264.1053(i), 264.1054, and 264.1057(f), the test shall comply with the following requirements:

(1) The requirements of paragraphs (b)(1) through (4) of this section shall apply.

(2) The background level shall be determined as set forth in Reference Method 21.

(3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(d) In accordance with the waste analysis plan required by Section 264.13(b), an owner or operator of a facility must determine, for each piece of equipment, whether the equipment contains or contacts a hazardous waste with organic concentration that equals or exceeds 10 percent by weight using the following:

(1) Methods described in ASTM Methods D 2267-88, E 169-87, E 168-88, E 260-85 (incorporated by reference under Section 260.11);

(2) Method 9060 or 8240 of SW-846 (incorporated by reference under Section 260.11); or

(3) Application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced. Documentation of a waste determination by knowledge is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has preciously been demonstrated by direct measurement to have a total organic content less than 10 percent, or prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.

(e) If an owner or operator determines that a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10 percent by weight, the determination can be revised only after following the procedures in paragraph (d)(1) or (d)(2) of this section.

(f) When an owner or operator and the Regional Administrator do not agree on whether a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10 percent by weight, the procedures in paragraph (d)(1) or (d)(2) of this section can be used to resolve the dispute.

(g) Samples used in determining the percent organic content shall be representative of the highest total organic content hazardous waste that is expected to be contained in or contact the equipment.

(h) To determine if pumps or valves are in light liquid service, the vapor pressures of constituents may be obtained from standard reference texts or may be determined by ASTM D-2879-86 (incorporated by reference under Section 260.11).

(i) Performance tests to determine if a control device achieves 95 weight percent organic emission reduction shall comply with the procedures of Section 264.1034(c)(1) through (c)(4).

264.1064 Recordkeeping requirements.

(a) (1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one hazardous waste management unit subject to the provisions of this subpart may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

(b) Owners and operators must record the following information in the facility operating record:

(1) For each piece of equipment to which Subpart BB of Part 264 applies:

(i) Equipment identification number and hazardous waste management unit identification.

(ii) Approximate locations within the facility (e.g. identify the hazardous waste management unit on a facility plot plan).

(iii) Type of equipment (e.g., a pump or pipeline valve).

(iv) Percent-by-weight total organics in the hazardous waste stream at the equipment.

(v) Hazardous waste state at the equipment (e.g., gas/vapor or liquid).

(vi) Method of compliance with the standard (e.g., "monthly leak detection and repair" or "equipped with dual mechanical seals").

(2) For facilities that comply with the provisions of Section 264.1033(a)(2), an implementation schedule as specified in Section 264.1033(a)(2).

(3) Where an owner or operator chooses to use test data to demonstrate the organic removal efficiency or total organic compound concentration achieved by the control device a performance test plan as specified in Section 264.1035(b)(3).

(4) Documentation of compliance with Section 264.1060, including the detailed design documentation or performance test results specified in Section 264.1035(b)(4).

(c) When each leak is detected as specified in Sections 264.1052, 264.1053, 264.1057, and 264.1058, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, the date evidence of a potential leak was found in accordance with Section 264.1058(a), and the date the leak was detected, shall be attached to the leaking equipment.

(2) The identification on equipment, except on a valve, may be removed after it has been repaired.

(3) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in Sections 264.1057(c) and no leak has been detected during those 2 months.

(d) When each leak is detected as specified in Sections 264.1052, 264.1053, 264.1057, and 264.1058, the following information shall be recorded in an inspection log and shall be kept in the facility operating record:

(1) The instrument and operator identification numbers and the equipment identification number.

(2) The date evidence of a potential leak was found in accordance with Section 264.1058(a).

(3) The date the leak was detected and the dates of each attempt to repair the leak.

(4) Repair methods applied in each attempt to repair the leak.

(5) "Above 10,000" if the maximum instrument reading measured by the methods specified in Section 264.1063(b) after each repair attempt is equal to or greater than 10,000 ppm.

(6) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(7) Documentation supporting the delay of repair of a valve in compliance with Section 264.1059(c).

(8) The signature of the owner or operator (or designate) whose decision it was that repair could not be affected without a hazardous waste management unit shutdown.

(9) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.

(10) The date of successful repair of the leak.

(e) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of Section 264.1060 shall be recorded and kept up-to-date in the facility operating record as specified in Section 264.1035(c). Design documentation is specified in Section 264.1035(c)(1) and (c)(2) and monitoring, operating, and inspection information in Section 264.1035(c)(3)-(c)(8).

(f) For a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system, the Regional Administrator will specify the appropriate recordkeeping requirements.

(g) The following information pertaining to all equipment subject to the requirements in Sections 264.1052 through 264.1060 shall 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 the requirements of this subpart.
  (2) (i) A list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, under the provisions of Sections 264.1052(e), 264.1053(i), and 264.1057(f).
  (ii) The designation of this equipment as subject to the requirements of Sections 264.1052(e), 264.1053(i), or 264.1057(f) shall be signed by the owner or operator.
  (3) A list of equipment identification numbers for pressure relief devices required to comply with Section 264.1054(a).
  (4) (i) The dates of each compliance test required in Sections 264.1052(e), 264.1053(i), 264.1054, and 264.1057(f).
  (ii) The background level measured during each compliance test.
  (iii) The maximum instrument reading measured at the equipment during each compliance test.
  (5) A list of identification numbers for equipment in vacuum service.
  (6) Identification, either by list or location (area or group) of equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for a period of less than 300 hours per year.

(h) The following information pertaining to all valves subject to the requirements of Section 264.1057(g) and (h) shall be recorded in a log that is kept in the facility operating record:
  (1) A list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve.
  (2) A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.

(i) The following information shall be recorded in the facility operating record for valves complying with Section 264.1062.
  (1) A schedule of monitoring.
  (2) The percent of valves found leaking during each monitoring period.

(j) The following information shall be recorded in a log that is kept in the facility operating record:
  (1) Criteria required in Section 264.1052(e)(5)(ii) and Section 264.1053(e)(2) and an explanation of the design criteria.
  (2) Any changes to these criteria and the reasons for the changes.

(k) The following information shall 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 this subpart and other specific subparts:
  (1) An analysis determining the design capacity of the hazardous waste management unit.
  (2) A statement listing the hazardous waste influent to and effluent from each hazardous waste management unit subject to the requirements in Sections 264.1052 through 264.1060 and an analysis determining whether these hazardous wastes are heavy liquids.
  (3) An up-to-date analysis and the supporting information and data used to determine whether or not equipment is subject to the requirements in Sections 264.1052 through 264.1060. The record shall include supporting documentation as required by Section 264.1063(d)(3) when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used. If the owner or operator takes any action (e.g., changing the process that produced the waste) that could result in an increase in the total organic content of the waste contained in or contacted by equipment determined not to be subject to the requirements in Sections 264.1052 through 264.1060, then a new determination is required.

(l) Records of the equipment leak information required by paragraph (d) of this section and the operating information required by paragraph (e) of this section need be kept only 3 years.

(m) The owner or operator of any facility that is subject to this subpart and to regulations at 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, may elect to determine compliance with this subpart by documentation either pursuant to Section 264.1064 of this subpart, or pursuant to those provisions of 40 CFR part 60 or 61, to the extent that the documentation under the regulation at 40 CFR part 60 or part 61 duplicates the documentation required under this subpart. The documentation under the regulation at 40 CFR part 60 or part 61 shall be kept with or made readily available with the facility operating record.

264.1065 Reporting requirements.

(a) A semiannual report shall be submitted by owners and operators subject to the requirements of this subpart to the Regional Administrator by dates specified by the Regional Administrator. The report shall include the following information:
  (1) The Environmental Protection Agency identification number, name, and address of the facility.
  (2) For each month during the semiannual reporting period:
    (i) The equipment identification number of each valve for which a leak was not repaired as required in Section 264.1057(d).
    (ii) The equipment identification number of each pump for which a leak was not repaired as required in Section 264.1052(c) and (d)(6).
    (iii) The equipment identification number of each compressor for which a leak was not repaired as required in Section 264.1053(g).
  (3) Dates of hazardous waste management unit shutdowns that occurred within the semiannual reporting period.
  (4) For each month during the semiannual reporting period, dates when the control device installed as required by Section 264.1052, 264.1053, 264.1054, or 264.1055 exceeded or operated outside of the design specifications as defined in Section 264.1064(e) and as indicated by the control device monitoring required by Section 264.1060 and was not corrected within 24 hours, the duration and cause of each exceedance, and any corrective measures taken.

(b) If, during the semiannual reporting period, leaks from valves, pumps, and compressors are repaired as required in Sections 264.1057(d), 264.1052(c) and (d)(6), and 264.1053(g), respectively, and the control device does not exceed or operate outside of the design specifications as defined in Section 264.1064(e) for more than 24 hours, a report to the Regional Administrator is not required.

264.1066-264.1079 (Reserved)

(x) 40 CFR 264.1080 through 264.1091 (Subpart CC), "Air Emission Standards for Tanks, Surface Impoundments, and Containers", are incorporated by reference including subsequent amendments and editions.

SUBPART CC - AIR EMISSION STANDARDS FOR TANKS, SURFACE IMPOUNDMENTS, AND CONTAINERS

264.1080 Applicability.

(a) The requirements of this subpart apply to owners and operators of all facilities that treat, store, or dispose of hazardous waste in tanks, surface impoundments, or containers subject to either subparts I, J, or K of this part except as Section 264.1 and paragraph (b) of this section provide otherwise.

(b) The requirements of this subpart do not apply to the following waste management units at the facility:

(1) A waste management unit that holds hazardous waste placed in the unit before October 6, 1996, and in which no hazardous waste is added to the unit on or after this date.

(2) A container that has a design capacity less than or equal to 0.1 m^3.

(3) A tank in which an owner or operator has stopped adding hazardous waste and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan.

(4) A surface impoundment in which an owner or operator has stopped adding hazardous waste (except to implement an approved closure plan) and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan.

(5) A waste management unit that is used solely for on-site treatment or storage of hazardous waste that is generated as the result of implementing remedial activities required under the corrective action authorities of RCRA sections 3004(u), 3004(v) or 3008(h) CERCLA authorities, or similar Federal or State authorities.

(6) A waste management unit that is used solely for the management of radioactive mixed waste in accordance with all applicable regulations under the authority of the Atomic Energy Act and the Nuclear Waste Policy Act.

(7) A hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63. For the purpose of complying with this paragraph, a tank for which the air emission control includes an enclosure, as opposed to a cover, must be in compliance with the enclosure and control device requirements of Section 264.1084(I), except as procided in Section 264.1082(c)(5).

(8) A tank that has a process vent as defined in 40 CFR 264.1031.

(c) For the owner and operator of a facility subject to this subpart and who received a final permit under RCRA section 3005 prior to October 6, 1996, the requirements of this subpart shall be incorporated into the permit when the permit is reissued in accordance with the requirements of 40 CFR 124.15 of this chapter or reviewed in accordance with the requirements of 40 CFR 270.50(d) of this chapter. Until such date when the owner and operator receives a final permit incorporating the requirements of this subpart, the owner and operator is subject to the requirements of 40 CFR part 265, subpart CC.

(d) The requirements of this subpart, except for the recordkeeping requirements specified in Section 264.1089(i) of this subpart, are administratively stayed for a tank or a container used for the management of hazardous waste generated by organic peroxide manufacturing and its associated laboratory operations when the owner or operator of the unit meets all of the following conditions:

(1) The owner or operator identifies that the tank or container receives hazardous waste generated by an organic peroxide manufacturing process producing more than one functional family of organic peroxides or multiple organic peroxides within one functional family, that one or more of these organic peroxides could potentially undergo self-accelerating thermal decomposition at or below ambient temperatures, and that organic peroxides are the predominant products manufactured by the process. For the purpose of meeting the conditions of this paragraph, "Organic peroxide" means an organic compound that contains the bivalent --O--O--structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.

(2) The owner or operator prepares documentation, in accordance with the requirements of Section 264.1089(i) of this subpart, explaining why an undue safety hazard would be created if air emission controls specified in Sections 264.1084 through 264.1087 of this subpart are installed and operated on the tanks and containers used at the facility to manage the hazardous waste generated by the organic peroxide manufacturing process or processes meeting the conditions of paragraph (d)(1) of this section.

(3) The owner or operator notifies the Regional Administrator in writing that hazardous waste generated by an organic peroxide manufacturing process or processes meeting the conditions of paragraph (d)(1) of this section are managed at the facility in tanks or containers meeting the conditions of paragraph (d)(2) of this section. The notification shall state the name and address of the facility, and be signed and dated by an authorized representative of the facility owner or operator.

264.1081 Definitions.

As used in this subpart, all terms shall have the meaning given to them in 40 CFR 265.1081, the Act, and parts 260 through 266 of this chapter.

264.1082 Standards: General.

(a) This section applies to the management of hazardous waste in tanks, surface impoundments, and containers subject to this subpart.

(b) The owner or operator shall control air pollutant emissions from each waste management unit in accordance with standards specified in Sections 264.1084 through 264.1087 of this subpart, as applicable to the waste management unit, except as provided for in paragraph (c) of this section.

(c) A tank, surface impoundment, or container is exempt from standards specified in Sec. 264.1084 through Sec. 264.1087 of this subpart, as applicable, provided that the waste management unit is one of the following:

(1) A tank, surface impoundment, or container for which all hazardous waste entering the unit has an average VO concentration at the point of waste origination of less than 500 parts per million by weight (ppmw). The average VO concentration shall be determined using the procedures specified in Sec. 264.1083(a) of this subpart. The owner or operator shall review and update, as necessary, this determination at least once every 12 months following the date of the initial determination for the hazardous waste streams entering the unit.

(2) A tank, surface impoundment, or container for which the organic content of all the hazardous waste entering the waste management unit has been reduced by an organic destruction or removal process that achieves any one of the following conditions:

(i) A process that removes or destroys the organics contained in the hazardous waste to a level such that the average VO concentration of the hazardous waste at the point of waste treatment is less than the exit concentration limit (C) established for the process. The average VO concentration of the hazardous waste at the point of waste treatment and the exit concentration limit for the process shall be determined using the procedures specified in Section 264.1083(b) of this subpart.

(ii) A process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than 100 percent, and the average VO concentration of the hazardous waste at the point of waste treatment is less than 50 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in Section 264.1083(b) of this subpart.

(iii) A process that removes or destroys the organics contained in the hazardous waste to a level such that the actual organic mass removal rate (MR) for the process is equal to or greater than the required organic mass removal rate (RMR) established for the process. The required organic mass removal rate and the actual organic mass removal rate for the process shall be determined using the procedures specified in Section 264.1083(b) of this subpart.

(iv) A biological process that destroys or degrades the organics contained in the hazardous waste, such that either of the following conditions is met:

(A) The organic reduction efficiency (R) for the process is equal to or greater than 95 percent, and the organic biodegradation efficiency (Rbio) for the process is equal to or greater than 95 percent. The organic reduction efficiency and the organic biodegradation efficiency for the process shall be determined using the procedures specified in Section 264.1083(b) of this subpart.

(B) The total actual organic mass biodegradation rate (MRbio) for all hazardous waste treated by the process is equal to or greater than the required organic mass removal rate (RMR). The required organic mass removal rate and the actual organic mass biodegradation rate for the process shall be determined using the procedures specified in Section 264.1083(b) of this subpart.

(v) A process that removes or destroys the organics contained in the hazardous waste and meets all of the following conditions:

(A) From the point of waste origination through the point where the hazardous waste enters the treatment process, the hazardous waste is managed continuously in waste management units which use air emission controls in accordance with the standards specified in Sec. 264.1084 through Sec. 264.1087 of this subpart, as applicable to the waste management unit.

(B) From the point of waste origination through the point where the hazardous waste enters the treatment process, any transfer of the hazardous waste is accomplished through continuous hard-piping or other closed system transfer that does not allow exposure of the waste to the atmosphere. The EPA considers a drain system that meets the requirements of 40 CFR part 63, subpart RR--National Emission Standards for Individual Drain Systems to be a closed system.

(C) The average VO concentration of the hazardous waste at the point of waste treatment is less than the lowest average VO concentration at the point of waste origination determined for each of the individual waste streams entering the process or 500 ppmw, whichever value is lower. The average VO concentration of each individual waste stream at the point of waste origination shall be determined using the procedures specified in Sec. 264.1083(a) of this subpart. The average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in Sec. 264.1083(b) of this subpart.

(vi) A process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than 95 percent and the owner or operator certifies that the average VO concentration at the point of waste origination for each of the individual waste streams entering the process is less than 10,000 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste origination shall be determined using the procedures specified in Sec. 264.1083(b) and Sec. 264.1083(a) of this subpart, respectively.

(vii) A hazardous waste incinerator for which the owner or operator has either:

(A) Been issued a final permit under 40 CFR part 270 which implements the requirements of subpart O of this part; or

(B) Has designed and operates the incinerator in accordance with the interim status requirements of 40 CFR part 265, subpart O.

(viii) A boiler or industrial furnace for which the owner or operator has either:

(A) Been issued a final permit under 40 CFR part 270 which implements the requirements of 40 CFR part 266, subpart H, or

(B) Has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of 40 CFR part 266, subpart H.

(ix) For the purpose of determining the performance of an organic destruction or removal process in accordance with the conditions in each of paragraphs (c)(2)(i) through (c)(2)(vi) of this section, the owner or operator shall account for VO concentrations determined to be below the limit of detection of the analytical method by using the following VO concentration:

(A) If Method 25D in 40 CFR part 60, appendix A is used for the analysis, one-half the blank value determined in the method.

(B) If any other analytical method is used, one-half the limit of detection established for the method.

(3) A tank used for biological treatment of hazardous waste in accordance with the requirements of paragraph (c)(2)(iv) of this section.

(4) A tank, surface impoundment, or container for which all hazardous waste placed in the unit either:

(i) Meets the numerical concentration limits for organic hazardous constituents, applicable to the hazardous waste, as specified in 40 CFR part 268--Land Disposal Restrictions under Table "Treatment Standards for Hazardous Waste" in 40 CFR 268.40; or

(ii) Has been treated by the treatment technology established by EPA for the waste in 40 CFR 268.42(a), or treated by an equivalent method of treatment approved by EPA pursuant to 40 CFR 268.42(b).

(5) A tank used for bulk feed of hazardous waste to a waste incinerator and all of the following conditions are met:

(i) The tank is located inside an enclosure vented to a control device that is designed and operated in accordance with all applicable requirements specified under 40 CFR part 61, subpart FF--National Emission Standards for Benzene Waste Operations for a facility at which the total annual benzene quantity from the facility waste is equal to or greater than 10 megagrams per year;

(ii) The enclosure and control device serving the tank were installed and began operation prior to November 25, 1996 and

(iii) The enclosure is designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical or electrical equipment; or to direct air flow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" annually.

(d) The Regional Administrator may at any time perform or request that the owner or operator perform a waste determination for a hazardous waste managed in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of this section as follows:

(1) The waste determination for average VO concentration of a hazardous waste at the point of waste origination shall be performed using direct measurement in accordance with the applicable requirements of Sec. 264.1083(a) of this subpart. The waste determination for a hazardous waste at the point of waste treatment shall be performed in accordance with the applicable requirements of Sec. 264.1083(b) of this subpart.

(2) In performing a waste determination pursuant to paragraph (d)(1) of this section, the sample preparation and analysis shall be conducted as follows:

(i) In accordance with the method used by the owner or operator to perform the waste analysis, except in the case specified in paragraph (d)(2)(ii) of this section.

(ii) If the Regional Administrator determines that the method used by the owner or operator was not appropriate for the hazardous waste managed in the tank, surface impoundment, or container, then the Regional Administrator may choose an appropriate method.

(3) In a case when the owner or operator is requested to perform the waste determination, the Regional Administrator may elect to have an authorized representative observe the collection of the hazardous waste samples used for the analysis.

(4) In a case when the results of the waste determination performed or requested by the Regional Administrator do not agree with the results of a waste determination performed by the owner or operator using knowledge of the waste, then the results of the waste determination performed in accordance with the requirements of paragraph (d)(1) of this section shall be used to establish compliance with the requirements of this subpart.

(5) In a case when the owner or operator has used an averaging period greater than 1 hour for determining the average VO concentration of a hazardous waste at the point of waste origination, the Regional Administrator may elect to establish compliance with this subpart by performing or requesting that the owner or operator perform a waste determination using direct measurement based on waste samples collected within a 1-hour period as follows:

(i) The average VO concentration of the hazardous waste at the point of waste origination shall be determined by direct measurement in accordance with the requirements of Section 264.1083(a) of this subpart.

(ii) Results of the waste determination performed or requested by the Regional Administrator showing that the average VO concentration of the hazardous waste at the point of waste origination is equal to or greater than 500 ppmw shall constitute noncompliance with this subpart except in a case as provided for in paragraph (e)(5)(iii) of this section.

(iii) For the case when the average VO concentration of the hazardous waste at the point of waste origination previously has been determined by the owner or operator using an averaging period greater than 1 hour to be less than 500 ppmw but because of normal operating process variations the VO concentration of the hazardous waste determined by direct measurement for any given 1-hour period may be equal to or greater than 500 ppmw, information that was used by the owner or operator to determine the average VO concentration of the hazardous waste (e.g., test results, measurements, calculations, and other documentation) and recorded in a facility records in accordance with the requirements of Section 264.1083(a) and Section 264.1089 of this subpart shall be considered by the Regional Administrator together with the results of the waste determination performed or requested by the Regional Administrator in establishing compliance with this subpart.

264.1083 Waste determination procedures.

(a) Waste determination procedure to determine average volatile organic (VO) concentration of a hazardous waste at the point of waste origination.
  (1) An owner or operator shall determine the average VO concentration at the point of waste origination for each hazardous waste placed in a waste management unit exempted under the provisions of Sec. 264.1082(c)(1) of this subpart from using air emission controls in accordance with standards specified in Sec. 264.1084 through Sec. 264.1087 of this subpart, as applicable to the waste management unit.
  (2) The average VO concentration of a hazardous waste at the point of waste origination may be determined in accordance with the procedures specified in 40 CFR 265.1084 (a)(2) through (a)(4).

(b) Waste determination procedures for treated hazardous waste.
  (1) An owner or operator shall perform the applicable waste determination for each treated hazardous waste placed in a waste management unit exempted under the provisions of Sec. 264.1082(c)(2) of this subpart from using air emission controls in accordance with standards specified in Sec. 264.1084 through Sec. 264.1087 of this subpart, as applicable to the waste management unit.
  (2) The waste determination for a treated hazardous waste shall be performed in accordance with the procedures specified in 40 CFR 265.1084 (b)(2) through (b)(9), as applicable to the treated hazardous waste.

(c) Procedure to determine the maximum organic vapor pressure of a hazardous waste in a tank.
  (1) An owner or operator shall determine the maximum organic vapor pressure for each hazardous waste placed in a tank using Tank Level 1 controls in accordance with standards specified in Sec. 264.1084(c) of this subpart.
  (2) The maximum organic vapor pressure of the hazardous waste may be determined in accordance with the procedures specified in 40 CFR 265.1084 (c)(2) through (c)(4).

(d) The procedure for determining no detectable organic emissions for the purpose of complying with this subpart shall be conducted in accordance with the procedures specified in 40 CFR 265.1084(d).

264.1084 Standards: Tanks.

(a) The provisions of this section apply to the control of air pollutant emissions from tanks for which Sec. 264.1082(b) of this subpart references the use of this section for such air emission control.

(b) The owner or operator shall control air pollutant emissions from each tank subject to this section in accordance with the following requirements as applicable:
  (1) For a tank that manages hazardous waste that meets all of the conditions specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section, the owner or operator shall control air pollutant emissions from the tank in accordance with the Tank Level 1 controls specified in paragraph (c) of this section or the Tank Level 2 controls specified in paragraph (d) of this section.
    (i) The hazardous waste in the tank has a maximum organic vapor pressure which is less than the maximum organic vapor pressure limit for the tank's design capacity category as follows:
      (A) For a tank design capacity equal to or greater than 151 m\3\, the maximum organic vapor pressure limit for the tank is 5.2 kPa.
      (B) For a tank design capacity equal to or greater than 75 m\3\ but less than 151 m\3\, the maximum organic vapor pressure limit for the tank is 27.6 kPa.
      (C) For a tank design capacity less than 75 m\3\, the maximum organic vapor pressure limit for the tank is 76.6 kPa.
    (ii) The hazardous waste in the tank is not heated by the owner or operator to a temperature that is greater than the temperature at which the maximum organic vapor pressure of the hazardous waste is determined for the purpose of complying with paragraph (b)(1)(i) of this section.
    (iii) The hazardous waste in the tank is not treated by the owner or operator using a waste stabilization process, as defined in 40 CFR 265.1081.
  (2) For a tank that manages hazardous waste that does not meet all of the conditions specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section, the owner or operator shall control air pollutant emissions from the tank by using Tank Level 2 controls in accordance with the requirements of paragraph (d) of this section. Examples of tanks required to use Tank Level 2 controls include: A tank used for a waste stabilization process; and a tank for which the hazardous waste in the tank has a maximum organic vapor pressure that is equal to or greater than the maximum organic vapor pressure limit for the tank's design capacity category as specified in paragraph (b)(1)(i) of this section.

(c) Owners and operators controlling air pollutant emissions from a tank using Tank Level 1 controls shall meet the requirements specified in paragraphs (c)(1) through (c)(4) of this section:

(1) The owner or operator shall determine the maximum organic vapor pressure for a hazardous waste to be managed in the tank using Tank Level 1 controls before the first time the hazardous waste is placed in the tank. The maximum organic vapor pressure shall be determined using the procedures specified in Sec. 264.1083(c) of this subpart. Thereafter, the owner or operator shall perform a new determination whenever changes to the hazardous waste managed in the tank could potentially cause the maximum organic vapor pressure to increase to a level that is equal to or greater than the maximum organic vapor pressure limit for the tank design capacity category specified in paragraph (b)(1)(i) of this section, as applicable to the tank.

(2) The tank shall be equipped with a fixed roof designed to meet the following specifications:

(i) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the hazardous waste in the tank. The fixed roof may be a separate cover installed on the tank (e.g., a removable cover mounted on an open-top tank) or may be an integral part of the tank structural design (e.g., a horizontal cylindrical tank equipped with a hatch).

(ii) The fixed roof shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.

(iii) Each opening in the fixed roof shall be either:

(A) Equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device; or

(B) Connected by a closed-vent system that is vented to a control device. The control device shall remove or destroy organics in the vent stream, and it shall be operating whenever hazardous waste is managed in the tank.

(iv) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: Organic vapor permeability, the effects of any contact with the hazardous waste or its vapors managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(3) Whenever a hazardous waste is in the tank, the fixed roof shall be installed with each closure device secured in the closed position except as follows:

(i) Opening of closure devices or removal of the fixed roof is allowed at the following times:

(A) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(B) To remove accumulated sludge or other residues from the bottom of tank.

(ii) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the tank internal pressure is within the internal pressure operating range determined by the owner or operator based on the tank manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the tank internal pressure exceeds the internal pressure operating range for the tank as a result of loading operations or diurnal ambient temperature fluctuations.

(iii) Opening of a safety device, as defined in 40 CFR 265.1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The owner or operator shall inspect the air emission control equipment in accordance with the following requirements.

(i) The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The owner or operator shall perform an initial inspection of the fixed roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except under the special conditions provided for in paragraph (l) of this section.

(iii) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (k) of this section.

(iv) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Sec. 264.1089(b) of this subpart.

(d) Owners and operators controlling air pollutant emissions from a tank using Tank Level 2 controls shall use one of the following tanks:

(1) A fixed-roof tank equipped with an internal floating roof in accordance with the requirements specified in paragraph (e) of this section;

(2) A tank equipped with an external floating roof in accordance with the requirements specified in paragraph (f) of this section;

(3) A tank vented through a closed-vent system to a control device in accordance with the requirements specified in paragraph (g) of this section;

(4) A pressure tank designed and operated in accordance with the requirements specified in paragraph (h) of this section; or

(5) A tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device in accordance with the requirements specified in paragraph (i) of this section.

(e) The owner or operator who controls air pollutant emissions from a tank using a fixed roof with an internal floating roof shall meet the requirements specified in paragraphs (e)(1) through (e)(3) of this section.

(1) The tank shall be equipped with a fixed roof and an internal floating roof in accordance with the following requirements:

(i) The internal floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

(ii) The internal floating roof shall be equipped with a continuous seal between the wall of the tank and the floating roof edge that meets either of the following requirements:

(A) A single continuous seal that is either a liquid-mounted seal or a metallic shoe seal, as defined in 40 CFR 265.1081; or

(B) Two continuous seals mounted one above the other. The lower seal may be a vapor-mounted seal.

(iii) The internal floating roof shall meet the following specifications:

(A) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(B) Each opening in the internal floating roof shall be equipped with a gasketed cover or a gasketed lid except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains.

(C) Each penetration of the internal floating roof for the purpose of sampling shall have a slit fabric cover that covers at least 90 percent of the opening.

(D) Each automatic bleeder vent and rim space vent shall be gasketed.

(E) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(F) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(2) The owner or operator shall operate the tank in accordance with the following requirements:

(i) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be completed as soon as practical.

(ii) Automatic bleeder vents are to be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(iii) Prior to filling the tank, each cover, access hatch, gauge float well or lid on any opening in the internal floating roof shall be bolted or fastened closed (i.e., no visible gaps). Rim space vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim exceeds the manufacturer's recommended setting.

(3) The owner or operator shall inspect the internal floating roof in accordance with the procedures specified as follows:

(i) The floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: The internal floating roof is not floating on the surface of the liquid inside the tank; liquid has accumulated on top of the internal floating roof; any portion of the roof seals have detached from

the roof rim; holes, tears, or other openings are visible in the seal fabric; the gaskets no longer close off the hazardous waste surface from the atmosphere; or the slotted membrane has more than 10 percent open area.

(ii) The owner or operator shall inspect the internal floating roof components as follows except as provided in paragraph (e)(3)(iii) of this section:

(A) Visually inspect the internal floating roof components through openings on the fixed-roof (e.g., manholes and roof hatches) at least once every 12 months after initial fill, and

(B) Visually inspect the internal floating roof, primary seal, secondary seal (if one is in service), gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every 10 years.

(iii) As an alternative to performing the inspections specified in paragraph (e)(3)(ii) of this section for an internal floating roof equipped with two continuous seals mounted one above the other, the owner or operator may visually inspect the internal floating roof, primary and secondary seals, gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every 5 years.

(iv) Prior to each inspection required by paragraph (e)(3)(ii) or (e)(3)(iii) of this section, the owner or operator shall notify the Regional Administrator in advance of each inspection to provide the Regional Administrator with the opportunity to have an observer present during the inspection. The owner or operator shall notify the Regional Administrator of the date and location of the inspection as follows:

(A) Prior to each visual inspection of an internal floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the owner or operator so that it is received by the Regional Administrator at least 30 calendar days before refilling the tank except when an inspection is not planned as provided for in paragraph (e)(3)(iv)(B) of this section.

(B) When a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator shall notify the Regional Administrator as soon as possible, but no later than 7 calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the Regional Administrator at least 7 calendar days before refilling the tank.

(v) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (k) of this section.

(vi) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Sec. 264.1089(b) of this subpart.

(f) The owner or operator who controls air pollutant emissions from a tank using an external floating roof shall meet the requirements specified in paragraphs (f)(1) through (f)(3) of this section.

(1) The owner or operator shall design the external floating roof in accordance with the following requirements:

(i) The external floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

(ii) The floating roof shall be equipped with two continuous seals, one above the other, between the wall of the tank and the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be a liquid-mounted seal or a metallic shoe seal, as defined in 40 CFR 265.1081. The total area of the gaps between the tank wall and the primary seal shall not exceed 212 square centimeters (cm<SUP>2) per meter of tank diameter, and the width of any portion of these gaps shall not exceed 3.8 centimeters (cm). If a metallic shoe seal is used for the primary seal, the metallic shoe seal shall be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least 61 centimeters above the liquid surface.

(B) The secondary seal shall be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the secondary seal shall not exceed 21.2 square centimeters (cm<SUP>2) per meter of tank diameter, and the width of any portion of these gaps shall not exceed 1.3 centimeters (cm).

(iii) The external floating roof shall meet the following specifications:

(a) Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface.

(b) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid.
(c) Each access hatch and each gauge float well shall be equipped with a cover designed to be bolted or fastened when the cover is secured in the closed position.
(d) Each automatic bleeder vent and each rim space vent shall be equipped with a gasket.
(e) Each roof drain that empties into the liquid managed in the tank shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.
(f) Each unslotted and slotted guide pole well shall be equipped with a gasketed sliding cover or a flexible fabric sleeve seal.
(g) Each unslotted guide pole shall be equipped with a gasketed cap on the end of the pole.
(h) Each slotted guide pole shall be equipped with a gasketed float or other device which closes off the liquid surface from the atmosphere.
(i) Each gauge hatch and each sample well shall be equipped with a gasketed cover.

(2) The owner or operator shall operate the tank in accordance with the following requirements:
(i) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be completed as soon as practical.
(ii) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be secured and maintained in a closed position at all times except when the closure device must be open for access.
(iii) Covers on each access hatch and each gauge float well shall be bolted or fastened when secured in the closed position.
(iv) Automatic bleeder vents shall be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.
(v) Rim space vents shall be set to open only at those times that the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.
(vi) The cap on the end of each unslotted guide pole shall be secured in the closed position at all times except when measuring the level or collecting samples of the liquid in the tank.
(vii) The cover on each gauge hatch or sample well shall be secured in the closed position at all times except when the hatch or well must be opened for access.
(viii) Both the primary seal and the secondary seal shall completely coverthe annular space between the external floating roof and the wall of the tank in a continuous fashion except during inspections.

(3) The owner or operator shall inspect the external floating roof in accordance with the procedures specified as follows:
(i) The owner or operator shall measure the external floating roof seal gaps in accordance with the following requirements:
(A) The owner or operator shall perform measurements of gaps between the tank wall and the primary seal within 60 calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every 5 years.
(B) The owner or operator shall perform measurements of gaps between the tank wall and the secondary seal within 60 calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every year.
(C) If a tank ceases to hold hazardous waste for a period of 1 year or more, subsequent introduction of hazardous waste into the tank shall be considered an initial operation for the purposes of paragraphs (f)(3)(i)(A) and (f)(3)(i)(B) of this section.
(D) The owner or operator shall determine the total surface area of gaps in the primary seal and in the secondary seal individually using the following procedure:

(1) The seal gap measurements shall be performed at one or more floating roof levels when the roof is floating off the roof supports.
(2) Seal gaps, if any, shall be measured around the entire perimeter of the floating roof in each place where a 0.32-centimeter (cm) diameter uniform probe passes freely (without forcing or binding against the seal) between the seal and the wall of the tank and measure the circumferential distance of each such location.
(3) For a seal gap measured under paragraph (f)(3) of this section, the gap surface area shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.
(4) The total gap area shall be calculated by adding the gap surface areas determined for each identified gap location for the primary seal and the secondary seal individually, and then dividing the sum for each seal type by the nominal perimeter of the tank. These total gap areas for the primary seal and secondary seal are then compared to the respective standards for the seal type as specified in paragraph (f)(1)(ii) of this section.

(E) In the event that the seal gap measurements do not conform to the specifications in paragraph (f)(1)(ii) of this section, the owner or operator shall repair the defect in accordance with the requirements of paragraph (k) of this section.

(F) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Sec. 264.1089(b) of this subpart.

(ii) The owner or operator shall visually inspect the external floating roof in accordance with the following requirements:

(A) The floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: Holes, tears, or other openings in the rim seal or seal fabric of the floating roof; a rim seal detached from the floating roof; all or a portion of the floating roof deck being submerged below the surface of the liquid in the tank; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(B) The owner or operator shall perform an initial inspection of the external floating roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in paragraph (l) of this section.

(C) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (k) of this section.

(D) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Sec. 264.1089(b) of this subpart.

(iii) Prior to each inspection required by paragraph (f)(3)(i) or (f)(3)(ii) of this subpart, the owner or operator shall notify the Regional Administrator in advance of each inspection to provide the Regional Administrator with the opportunity to have an observer present during the inspection. The owner or operator shall notify the Regional Administrator of the date and location of the inspection as follows:

(A) Prior to each inspection to measure external floating roof seal gaps as required under paragraph (f)(3)(i) of this section, written notification shall be prepared and sent by the owner or operator so that it is received by the Regional Administrator at least 30 calendar days before the date the measurements are scheduled to be performed

(B) Prior to each visual inspection of an external floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the owner or operator so that it is received by the Regional Administrator at least 30 calendar days before refilling the tank except when an inspection is not planned as provided for in paragraph (f)(3)(iii)(C) of this section.

(C) When a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator shall notify the Regional Administrator as soon as possible, but no later than 7 calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the Regional Administrator at least 7 calendar days before refilling the tank.

(g) The owner or operator who controls air pollutant emissions from a tank by venting the tank to a control device shall meet the requirements specified in paragraphs (g)(1) through (g)(3) of this section.

(1) The tank shall be covered by a fixed roof and vented directly through a closed-vent system to a control device in accordance with the following requirements:

(i) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank.

(ii) Each opening in the fixed roof not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions.

(iii) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous wasteto the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall

include: Organic vapor permeability, the effects of any contact with the liquid and its vapor managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(iv) The closed-vent system and control device shall be designed and operated in accordance with the requirements of Sec. 264.1087 of this subpart.

(2) Whenever a hazardous waste is in the tank, the fixed roof shall be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows:

(i) Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times:

(A) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(B) To remove accumulated sludge or other residues from the bottom of a tank.

(ii) Opening of a safety device, as defined in 40 CFR 265.1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(3) The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:

(i) The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in Sec. 264.1087 of this subpart.

(iii) The owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in paragraph (l) of this section.

(iv) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (k) of this section.

(v) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Sec. 264.1089(b) of this subpart.

(h) The owner or operator who controls air pollutant emissions by using a pressure tank shall meet the following requirements.

(1) The tank shall be designed not to vent to the atmosphere as a result of compression of the vapor headspace in the tank during filling of the tank to its design capacity.

(2) All tank openings shall be equipped with closure devices designed to operate with no detectable organic emissions as determined using the procedure specified in Sec. 264.1083(d) of this subpart.

(3) Whenever a hazardous waste is in the tank, the tank shall be operated as a closed system that does not vent to the atmosphere except in the event that a safety device, as defined in 40 CFR 265.1081, is required to open to avoid an unsafe condition.

(i) The owner or operator who controls air pollutant emissions by using an enclosure vented through a closed-vent system to an enclosed combustion control device shall meet the requirements specified in paragraphs (i)(1) through (i)(4) of this section.

(1) The tank shall be located inside an enclosure. The enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in ``Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure'' under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to ``Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure'' initially when the enclosure is first installed and, thereafter, annually.

(2) The enclosure shall be vented through a closed-vent system to an enclosed combustion control device that is designed and operated in accordance with the standards for either a vapor incinerator, boiler, or process heater specified in Sec. 264.1087 of this subpart.

(3) Safety devices, as defined in 40 CFR 265.1081, may be installed and operated as necessary on any enclosure, closed-vent system, or control device used to comply with the requirements of paragraphs (i)(1) and (i)(2) of this section.

(4) The owner or operator shall inspect and monitor the closed-vent system and control device as specified in Sec. 264.1087 of this subpart.

(j) The owner or operator shall transfer hazardous waste to a tank subject to this section in accordance with the following requirements:

(1) Transfer of hazardous waste, except as provided in paragraph (j)(2) of this section, to the tank from another tank subject to this section or from a surface impoundment subject to Sec. 264.1085 of this subpart shall be conducted using continuous hard-piping or another closed system that does not allow exposure of the hazardous waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR part 63, subpart RR--National Emission Standards for Individual Drain Systems.

(2) The requirements of paragraph (j)(1) of this section do not apply when transferring a hazardous waste to the tank under any of the following conditions:

(i) The hazardous waste meets the average VO concentration conditions specified in Sec. 264.1082(c)(1) of this subpart at the point of waste origination.

(ii) The hazardous waste has been treated by an organic destruction or removal process to meet the requirements in Sec. 264.1082(c)(2) of this subpart.

(k) The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of paragraph (c)(4), (e)(3), (f)(3), or (g)(3) of this section as follows:

(1) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days afterdetection, and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in paragraph (k)(2) of this section.

(2) Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the hazardous waste normally managed in the tank. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the tank stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(l) Following the initial inspection and monitoring of the cover as required by the applicable provisions of this subpart, subsequent inspection and monitoring may be performed at intervals longer than 1 year under the following special conditions:

(1) In the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions, then the owner or operator may designate a cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:

(i) Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.

(ii) Develop and implement a written plan and schedule to inspect and monitor the cover, using the procedures specified in the applicable section of this subpart, as frequently as practicable during those times when a worker can safely access the cover.

(2) In the case when a tank is buried partially or entirely underground, an owner or operator is required to inspect and monitor, as required by the applicable provisions of this section, only those portions of the tank cover and those connections to the tank (e.g., fill ports, access hatches, gauge wells, etc.) that are located on or above the ground surface.

264.1085 Standards: Surface impoundments.

(a) The provisions of this section apply to the control of air pollutant emissions from surface impoundments for which Sec. 264.1082(b) of this subpart references the use of this section for such air emission control.

(b) The owner or operator shall control air pollutant emissions from the surface impoundment by installing and operating either of the following:

(1) A floating membrane cover in accordance with the provisions specified in paragraph (c) of this section; or

(2) A cover that is vented through a closed-vent system to a control device in accordance with the provisions specified in paragraph (d) of this sections.

(c) The owner or operator who controls air pollutant emissions from a surface impoundment using a floating membrane cover shall meet the requirements specified in paragraphs (c)(1) through (c)(3) of this section.

(1) The surface impoundment shall be equipped with a floating membrane cover designed to meet the following specifications:

(i) The floating membrane cover shall be designed to float on the liquid surface during normal operations and form a continuous barrier over the entire surface area of the liquid.

(ii) The cover shall be fabricated from a synthetic membrane material that is either:

(A) High density polyethylene (HDPE) with a thickness no less than 2.5 millimeters (mm); or

(B) A material or a composite of different materials determined to have both organic permeability properties that are equivalent to those of the material listed in paragraph (c)(1)(ii)(A) of this section and chemical and physical properties that maintain the material integrity for the intended service life of the material.

(iii) The cover shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between cover section seams or between the interface of the cover edge and its foundation mountings.

(iv) Except as provided for in paragraph (c)(1)(v) of this section, each opening in the floating membrane cover shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device.

(v) The floating membrane cover may be equipped with one or more emergency cover drains for removal of stormwater. Each emergency cover drain shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening or a flexible fabric sleeve seal.

(vi) The closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the closure devices throughout their intended service life. Factors to be considered when selecting the materials of construction and designing the cover and closure devices shall include: Organic vapor permeability; the effects of any contact with the liquid and its vapor managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the floating membrane cover is installed.

(2) Whenever a hazardous waste is in the surface impoundment, the floating membrane cover shall float on the liquid and each closure device shall be secured in the closed position except as follows:

(i) Opening of closure devices or removal of the cover is allowed at the following times:

(A) To provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the surface impoundment, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly replace the cover and secure the closure device in the closed position, as applicable.

(B) To remove accumulated sludge or other residues from the bottom of surface impoundment.

(ii) Opening of a safety device, as defined in 40 CFR 265.1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(3) The owner or operator shall inspect the floating membrane cover in accordance with the following procedures:

(i) The floating membrane cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The owner or operator shall perform an initial inspection of the floating membrane cover and its closure devices on or before the date that the surface impoundment becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in paragraph (g) of this section.

(iii) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (f) of this section.

(iv) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Sec. 264.1089(c) of this subpart.

(d) The owner or operator who controls air pollutant emissions from a surface impoundment using a cover vented to a control device shall meet the requirements specified in paragraphs (d)(1) through (d)(3) of this section.

(1) The surface impoundment shall be covered by a cover and vented directly through a closed-vent system to a control device in accordance with the following requirements:

(i) The cover and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the surface impoundment.

(ii) Each opening in the cover not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the cover is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the cover is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions using the procedure specified in Sec. 264.1083(d) of this subpart.

(iii) The cover and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the cover and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the cover and closure devices shall include: Organic vapor permeability; the effects of any contact with the liquid or its vapors managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the cover is installed.

(iv) The closed-vent system and control device shall be designed and operated in accordance with the requirements of Sec. 264.1087 of this subpart.

(2) Whenever a hazardous waste is in the surface impoundment, the cover shall be installed with each closure device secured in the closed position and the vapor headspace underneath the cover vented to the control device except as follows:

(i) Venting to the control device is not required, and opening of closure devices or removal of the cover is allowed at the following times:

(A) To provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the surface impoundment, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the surface impoundment.

(B To remove accumulated sludge or other residues from the bottom of surface impoundment.

(ii) Opening of a safety device, as defined in 40 CFR 265.1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(3) The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:

(i) The surface impoundment cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in Sec. 264.1087 of this subpart.

(iii) The owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the surface impoundment becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in paragraph (g) of this section.

(iv) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (f) of this section.

(v) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Sec. 264.1089(c) of this subpart.

(e) The owner or operator shall transfer hazardous waste to a surface impoundment subject to this section in accordance with the following requirements:

(1) Transfer of hazardous waste, except as provided in paragraph (e)(2) of this section, to the surface impoundment from another surface impoundment subject to this section or from a tank subject to Sec. 264.1084 of this subpart shall be conducted using continuous hard-piping or another closed system that does not allow exposure of the waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR part 63, subpart RR--National Emission Standards for Individual Drain Systems.

(2) The requirements of paragraph (e)(1) of this section do not apply when transferring a hazardous waste to the surface impoundment under either of the following conditions:

(i) The hazardous waste meets the average VO concentration conditions specified in Sec. 264.1082(c)(1) of this subpart at the point of waste origination.

(ii) The hazardous waste has been treated by an organic destruction or removal process to meet the requirements in Sec. 264.1082(c)(2) of this subpart.

(f) The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of paragraph (c)(3) or (d)(3) of this section as follows:

(1) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in paragraph (f)(2) of this section.

(2) Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the surface impoundment and no alternative capacity is available at the site to accept the hazardous waste normally managed in the surface impoundment. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the surface impoundment stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(g) Following the initial inspection and monitoring of the cover as required by the applicable provisions of this subpart, subsequent inspection and monitoring may be performed at intervals longer than 1 year in the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions. In this case, the owner or operator may designate the cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:

(1) Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.

(2) Develop and implement a written plan and schedule to inspect and monitor the cover using the procedures specified in the applicable section of this subpart as frequently as practicable during those times when a worker can safely access the cover.

264.1086 Standards: Containers.

(a) The provisions of this section apply to the control of air pollutant emissions from containers for which Sec. 264.1082(b) of this subpart references the use of this section for such air emission control.

(b) General requirements.

(1) The owner or operator shall control air pollutant emissions from each container subject to this section in accordance with the following requirements, as applicable to the container, except when the special provisions for waste stabilization processes specified in paragraph (b)(2) of this section apply to the container.

(i) For a container having a design capacity greater than 0.1 m\3\ and less than or equal to 0.46 m\3\, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in paragraph (c) of this section.

(ii) For a container having a design capacity greater than 0.46 m\3\ that is not in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in paragraph (c) of this section.

(iii) For a container having a design capacity greater than 0.46 m\3\ that is in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 2 standards specified in paragraph (d) of this section.

(2) When a container having a design capacity greater than 0.1 m<SUP>3 is used for treatment of a hazardous waste by a waste stabilization process, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 3 standards specified in paragraph (e) of this section at those times during the waste stabilization process when the hazardous waste in the container is exposed to the atmosphere.

(c) Container Level 1 standards.

(1) A container using Container Level 1 controls is one of the following:

(i) A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as specified in paragraph (f) of this section.

(ii) A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container (e.g., a lid on a drum or a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (e.g., a "portable tank" or bulk cargo container equipped with a screw-type cap).

(iii) An open-top container in which an organic-vapor suppressing barrier is placed on or over the hazardous waste in the container such that no hazardous waste is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor suppressing foam.

(2) A container used to meet the requirements of paragraph (c)(1)(ii) or (c)(1)(iii) of this section shall be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere and to maintain the equipment integrity for as long as it is in service. Factors to be considered in selecting the materials of construction and designing the cover and closure devices shall include: Organic vapor permeability, the effects of contact with the hazardous waste or its vapor managed in the container; the effects of outdoor exposure of the closure device or cover material to wind, moisture, and sunlight; and the operating practices for which the container is intended to be used.

(3) Whenever a hazardous waste is in a container using Container Level 1 controls, the owner or operator shall install all covers and closure devices for the container, as applicable to the container, and secure and maintain each closure device in the closed position except as follows:

(i) Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container as follows:

(A) In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(B) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

(ii) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:

(A) For the purpose of meeting the requirements of this section, an empty container as defined in 40 CFR 261.7(b) may be open to the atmosphere at any time (i.e., covers and closure devices are not required to be secured in the closed position on an empty container).

(B) In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in 40 CFR 261.7(b), the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(iii) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(iv) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(v) Opening of a safety device, as defined in 40 CFR 265.1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The owner or operator of containers using Container Level 1 controls shall inspect the containers and their covers and closure devices as follows:

(i) In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied (i.e., does not meet the conditions for an empty container as specified in 40 CFR 261.7(b)) within 24 hours after the container is accepted at the facility, the owner or operator shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (c)(4)(iii) of this section.

(ii) In the case when a container used for managing hazardous waste remains at the facility for a period of 1 year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (c)(4)(iii) of this section.

(iii) When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than 24 hours after detection and repair shall be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

(5) The owner or operator shall maintain at the facility a copy of the procedure used to determine that containers with capacity of 0.46 m<SUP>3 or greater, which do not meet applicable DOT regulations as specified in paragraph (f) of this section, are not managing hazardous waste in light material service.

(d) Container Level 2 standards.

(1) A container using Container Level 2 controls is one of the following:

(i) A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as specified in paragraph (f) of this section.

(ii) A container that operates with no detectable organic emissions as defined in 40 CFR 265.1081 and determined in accordance with the procedure specified in paragraph (g) of this section.

(iii) A container that has been demonstrated within the preceding 12 months to be vapor-tight by using 40 CFR part 60, appendix A, Method 27 in accordance with the procedure specified in paragraph (h) of this section.

(2) Transfer of hazardous waste in or out of a container using Container Level 2 controls shall be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive, or other hazardous materials. Examples of container loading procedures that the EPA considers to meet the requirements of this paragraph include using any one of the following: a submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.

(3) Whenever a hazardous waste is in a container using Container Level 2 controls, the owner or operator shall install all covers and closure devices for the container, and secure and maintain each closure device in the closed position except as follows:

(i) Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container as follows:

(A) In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(B) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the

shutdown of the process generating the material being added to the container, whichever condition occurs first.

(ii) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:

(A) For the purpose of meeting the requirements of this section, an empty container as defined in 40 CFR 261.7(b) may be open to the atmosphere at any time (i.e., covers and closure devices are not required to be secured in the closed position on an empty container).

(B) In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in 40 CFR 261.7(b), the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(iii) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(iv) Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emission when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(v) Opening of a safety device, as defined in 40 CFR 265.1081, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The owner or operator of containers using Container Level 2 controls shall inspect the containers and their covers and closure devices as follows:

(i) In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied (i.e., does not meet the conditions for an empty container as specified in 40 CFR 261.7(b)) within 24 hours after the container arrives at the facility, the owner or operator shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (d)(4)(iii) of this section.

(ii) In the case when a container used for managing hazardous waste remains at the facility for a period of 1 year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (d)(4)(iii) of this section.

(iii) When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than 24 hours after detection, and repair shall be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

(e) Container Level 3 standards.

(1) A container using Container Level 3 controls is one of the following:

(i) A container that is vented directly through a closed-vent system to a control device in accordance with the requirements of paragraph (e)(2)(ii) of this section.

(ii) A container that is vented inside an enclosure which is exhausted through a closed-vent system to a control device in accordance with the requirements of paragraphs (e)(2)(i) and (e)(2)(ii) of this section.

(2) The owner or operator shall meet the following requirements, as applicable to the type of air emission control equipment selected by the owner or operator:

(i) The container enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

(ii) The closed-vent system and control device shall be designed and operated in accordance with the requirements of Sec. 264.1087 of this subpart.

(3) Safety devices, as defined in 40 CFR 265.1081, may be installed and operated as necessary on any container, enclosure, closed-vent system, or control device used to comply with the requirements of paragraph (e)(1) of this section.

(4) Owners and operators using Container Level 3 controls in accordance with the provisions of this subpart shall inspect and monitor the closed-vent systems and control devices as specified in Sec. 264.1087 of this subpart.

(5) Owners and operators that use Container Level 3 controls in accordance with the provisions of this subpart shall prepare and maintain the records specified in Sec. 264.1089(d) of this subpart.

(f) For the purpose of compliance with paragraph (c)(1)(i) or (d)(1)(i) of this section, containers shall be used that meet the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as follows:

(1) The container meets the applicable requirements specified in 49 CFR part 178--Specifications for Packaging or 49 CFR part 179--Specifications for Tank Cars.

(2) Hazardous waste is managed in the container in accordance with the applicable requirements specified in 49 CFR part 107, subpart B--Exemptions; 49 CFR part 172--Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements; 49 CFR part 173--Shippers--General Requirements for Shipments and Packages; and 49 CFR part 180--Continuing Qualification and Maintenance of Packagings.

(3) For the purpose of complying with this subpart, no exceptions to the 49 CFR part 178 or part 179 regulations are allowed except as provided for in paragraph (f)(4) of this section.

(4) For a lab pack that is managed in accordance with the requirements of 49 CFR part 178 for the purpose of complying with this subpart, an owner or operator may comply with the exceptions for combination packagings specified in 49 CFR 173.12(b).

(g) The owner or operator shall use the procedure specified in Sec. 264.1083(d) of this subpart for determining a container operates with no detectable organic emissions for the purpose of complying with paragraph (d)(1)(ii) of this section.

(1) Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the container, its cover, and associated closure devices, as applicable to the container, shall be checked. Potential leak interfaces that are associated with containers include, but are not limited to: The interface of the cover rim and the container wall; the periphery of any opening on the container or container cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.

(2) The test shall be performed when the container is filled with a material having a volatile organic concentration representative of the range of volatile organic concentrations for the hazardous wastes expected to be managed in this type of container. During the test, the container cover and closure devices shall be secured in the closed position.

(h) Procedure for determining a container to be vapor-tight using Method 27 of 40 CFR part 60, appendix A for the purpose of complying with paragraph (d)(1)(iii) of this section.

(1) The test shall be performed in accordance with Method 27 of 40 CFR part 60, appendix A of this chapter.

(2) A pressure measurement device shall be used that has a precision of <plus-minus> 2.5 mm water and that is capable of measuring above the pressure at which the container is to be tested for vapor tightness.

(3) If the test results determined by Method 27 indicate that the container sustains a pressure change less than or equal to 750 Pascals within 5 minutes after it is pressurized to a minimum of 4,500 Pascals, then the container is determined to be vapor-tight.

264.1087 Standards: Closed-vent systems and control devices.

(a) This section applies to each closed-vent system and control device installed and operated by the owner or operator to control air emissions in accordance with standards of this subpart.

(b) The closed-vent system shall meet the following requirements:

(1) The closed-vent system shall route the gases, vapors, and fumes emitted from the hazardous waste in the waste management unit to a control device that meets the requirements specified in paragraph (c) of this section.

(2) The closed-vent system shall be designed and operated in accordance with the requirements specified in Section 264.1033(k) of this part.

(3) In the case when the closed-vent system includes bypass devices that could be used to divert the gas or vapor stream to the atmosphere before entering the control device, each bypass device shall be equipped with either a flow indicator as specified in paragraph (b)(3)(i) of this section or a seal or locking device as specified in paragraph (b)(3)(ii) of this section. For the purpose of complying with this paragraph, low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, spring loaded pressure relief valves, and other fittings used for safety purposes are not considered to be bypass devices.

(i) If a flow indicator is used to comply with paragraph (b)(3) of this section, the indicator shall be installed at the inlet to the bypass line used to divert gases and vapors from the closed-vent system to the atmosphere at a point upstream of the control device inlet. For this paragraph, a flow indicator means a device which indicates the presence of either gas or vapor flow in the bypass line.

(ii) If a seal or locking device is used to comply with paragraph (b)(3) of this section, the device shall be placed on the mechanism by which the bypass device position is controlled (e.g., valve handle, damper lever) when the bypass device is in the closed position such that the bypass device cannot be opened without breaking the seal or removing the lock. Examples of such devices include, but are not limited to, a car-seal or a lock-and-key configuration valve. The owner or operator shall visually inspect the seal or closure mechanism at least once every month to verify that the bypass mechanism is maintained in the closed position.

(4) The closed-vent system shall be inspected and monitored by the owner or operator in accordance with the procedure specified in Section 264.1033(l.)

(c) The control device shall meet the following requirements:

(1) The control device shall be one of the following devices:

(i) A control device designed and operated to reduce the total organic content of the inlet vapor stream vented to the control device by at least 95 percent by weight;

(ii) An enclosed combustion device designed and operated in accordance with the requirements of Section 264.1033(c) of this part; or

(iii) A flare designed and operated in accordance with the requirements of Section 264.1033(d) of this part.

(2) The owner or operator who elects to use a closed-vent system and control device to comply with the requirements of this section shall comply with the requirements specified in paragraphs (c)(2)(i) through (c)(2)(vi) of this section.

(i) Periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of paragraphs (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this section, as applicable, shall not exceed 240 hours per year.

(ii) The specifications and requirements in paragraphs (c)(1)(i), (c)(1)(ii), and (c)(1)(iii) of this section for control devices do not apply during periods of planned routine maintenance.

(iii) The specifications and requirements in paragraphs (c)(1)(i), (c)(1)(ii), and (c)(1)(iii) of this section for control devices do not apply during a control device system malfunction.

(iv) The owner or operator shall demonstrate compliance with the requirements of paragraph (c)(2)(i) of this section (i.e., planned routine maintenance of a control device, during which the control device does not meet the specifications of paragraphs (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this section, as applicable, shall not exceed 240 hours per year) by recording the information specified in Sec. 264.1089(e)(1)(v) of this subpart.

(v) The owner or operator shall correct control device system malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of air pollutants.

(vi) The owner or operator shall operate the closed-vent system such that gases, vapors, or fumes are not actively vented to the control device during periods of planned maintenance or control device system malfunction (i.e., periods when the control device is not operating or not operating

normally) except in cases when it is necessary to vent the gases, vapors, and/or fumes to avoid an unsafe condition or to implement malfunction corrective actions or planned maintenance actions.

(3) The owner or operator using a carbon adsorption system to comply with paragraph (c)(1) of this section shall operate and maintain the control device in accordance with the following requirements:
   (i) Following the initial startup of the control device, all activated carbon in the control device shall be replaced with fresh carbon on a regular basis in accordance with the requirements of Section 264.1033(g) or Section 264.1033(h) of this part.
   (ii) All carbon removed from the control device shall be managed in accordance with the requirements of 40 CFR 264.1033(n).

(4) An owner or 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 shall operate and maintain the control device in accordance with the requirements of Section 264.1033(j) of this part.

(5) The owner or operator shall demonstrate that a control device achieves the performance requirements of paragraph (c)(1) of this section as follows:
   (i) An owner or operator shall demonstrate using either a performance test as specified in paragraph (c)(5)(iii) of this section or a design analysis as specified in paragraph (c)(5)(iv) of this section the performance of each control device except for the following:
      (A) A flare;
      (B) A boiler or process heater with a design heat input capacity of 44 megawatts or greater;
      (C) A boiler or process heater into which the vent stream is introduced with the primary fuel;
      (D) A boiler or industrial furnace burning hazardous waste for which the owner or operator has been issued a final permit under 40 CFR part 270 and has designed and operates the unit in accordance with the requirements of 40 CFR part 266, subpart H; or
      (E) A boiler or industrial furnace burning hazardous waste for which the owner or operator has designed and operates in accordance with the interim status requirements of 40 CFR part 266, subpart H.
   (ii) An owner or operator shall demonstrate the performance of each flare in accordance with the requirements specified in Section 264.1033(e).
   (iii) For a performance test conducted to meet the requirements of paragraph (c)(5)(i) of this section, the owner or operator shall use the test methods and procedures specified in Section 264.1034(c)(1) through (c)(4).
   (iv) For a design analysis conducted to meet the requirements of paragraph (c)(5)(i) of this section, the design analysis shall meet the requirements specified in Section 264.1035(b)(4)(iii).
   (v) The owner or operator shall demonstrate that a carbon adsorption system achieves the performance requirements of paragraph (c)(1) of this section based on the total quantity of organics vented to the atmosphere from all carbon adsorption system equipment that is used for organic adsorption, organic desorption or carbon regeneration, organic recovery, and carbon disposal.

(6) If the owner or operator and the Regional Administrator do not agree on a demonstration of control device performance using a design analysis then the disagreement shall be resolved using the results of a performance test performed by the owner or operator in accordance with the requirements of paragraph (c)(5)(iii) of this section. The Regional Administrator may choose to have an authorized representative observe the performance test.

(7) The control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in 40 CFR 264.1033(f)(2) and 40 CFR 264.1033(l). The readings from each monitoring device required by 40 CFR 264.1033(f)(2) shall be inspected at least once each operating day to check control device operation. Any necessary corrective measures shall be immediately implemented to ensure the control device is operated in compliance with the requirements of this section.

264.1088 Inspection and monitoring requirements.

(a) The owner or operator shall inspect and monitor air emission control equipment used to comply with this subpart in accordance with the applicable requirements specified in Sec. 264.1084 through Sec. 264.1087 of this subpart.

(b) The owner or operator shall develop and implement a written plan and schedule to perform the inspections and monitoring required by paragraph (a) of this section. The owner or operator shall incorporate this plan and schedule into the facility inspection plan required under 40 CFR 264.15.

264.1089 Recordkeeping requirements.

(a) Each owner or operator of a facility subject to requirements in this subpart shall record and maintain the information specified in paragraphs (b) through (i) of this section, as applicable to the facility. Except for air emission control equipment design documentation and information required by paragraph (i) of this section, records required by this section shall be maintained in the operating record for a minimum of 3 years. Air emission control equipment design documentation shall be maintained in the operating record until the air emission control equipment is replaced or otherwise no longer in service. Information required by paragraph (i) of this section shall be maintained in the operating record for as long as the tank or container is not using air emission controls specified in Secs. 264.1084 through 264.1087 of this subpart in accordance with the conditions specified in Sec. 264.1084(d) of this subpart.

(b) The owner or operator of a tank using air emission controls in accordance with the requirements of Sec. 264.1084 of this subpart shall prepare and maintain records for the tank that include the following information:

(1) For each tank using air emission controls in accordance with the requirements of Sec. 264.1084 of this subpart, the owner or operator shall record:

(i) A tank identification number (or other unique identification description as selected by the owner or operator).

(ii) A record for each inspection required by Sec. 264.1084 of this subpart that includes the following information:

(A) Date inspection was conducted.

(B) For each defect detected during the inspection, the following information: The location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of Sec. 264.1084 of this subpart, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(2) In addition to the information required by paragraph (b)(1) of this section, the owner or operator shall record the following information, as applicable to the tank:

(i) The owner or operator using a fixed roof to comply with the Tank Level 1 control requirements specified in Sec. 264.1084(c) of this subpart shall prepare and maintain records for each determination for the maximum organic vapor pressure of the hazardous waste in the tank performed in accordance with the requirements of Sec. 264.1084(c) of this subpart. The records shall include the date and time the samples were collected, the analysis method used, and the analysis results.

(ii) The owner or operator using an internal floating roof to comply with the Tank Level 2 control requirements specified in Sec. 264.1084(e) of this subpart shall prepare and maintain documentation describing the floating roof design.

(iii) Owners and operators using an external floating roof to comply with the Tank Level 2 control requirements specified in Sec. 264.1084(f) of this subpart shall prepare and maintain the following records:

(A) Documentation describing the floating roof design and the dimensions of the tank.

(B) Records for each seal gap inspection required by Sec. 264.1084(f)(3) of this subpart describing the results of the seal gap measurements. The records shall include the date that the measurements were performed, the raw data obtained for the measurements, and the calculations of the total gap surface area. In the event that the seal gap measurements do not conform to the specifications in Sec. 264.1084(f)(1) of this subpart, the records shall include a description of the repairs that were made, the date the repairs were made, and the date the tank was emptied, if necessary.

(iv) Each owner or operator using an enclosure to comply with the Tank Level 2 control requirements specified in Sec. 264.1084(i) of this subpart shall prepare and maintain the following records:

(A) Records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

(B) Records required for the closed-vent system and control device in accordance with the requirements of paragraph (e) of this section.

(C) The owner or operator of a surface impoundment using air emission controls in accordance with the requirements of Sec. 264.1085 of this subpart shall prepare and maintain records for the surface impoundment that include the following information:

(1) A surface impoundment identification number (or other unique identification description as selected by the owner or operator).

(2) Documentation describing the floating membrane cover or cover design, as applicable to the surface impoundment, that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in Sec. 264.1085(c) of this subpart.

(3) A record for each inspection required by Sec. 264.1085 of this subpart that includes the following information:

(i) Date inspection was conducted.

(ii) For each defect detected during the inspection the following information: The location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of Sec. 264.1085(f) of this subpart, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(4) For a surface impoundment equipped with a cover and vented through a closed-vent system to a control device, the owner or operator shall prepare and maintain the records specified in paragraph (e) of this section.

(d) The owner or operator of containers using Container Level 3 air emission controls in accordance with the requirements of Sec. 264.1086 of this subpart shall prepare and maintain records that include the following information:

(1) Records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T–Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

(2) Records required for the closed-vent system and control device in accordance with the requirements of paragraph (e) of this section.

(e) The owner or operator using a closed-vent system and control device in accordance with the requirements of Sec. 264.1087 of this subpart shall prepare and maintain records that include the following information:

(1) Documentation for the closed-vent system and control device that includes:

(i) Certification that is signed and dated by the owner or operator stating that the control device is designed to operate at the performance level documented by a design analysis as specified in paragraph (e)(1)(ii) of this section or by performance tests as specified in paragraph (e)(1)(iii) of this section when the tank, surface impoundment, or container is or would be operating at capacity or the highest level reasonably expected to occur.

(ii) If a design analysis is used, then design documentation as specified in 40 CFR 264.1035(b)(4). The documentation shall include information prepared by the owner or operator or provided by the control device manufacturer or vendor that describes the control device design in accordance with 40 CFR 264.1035(b)(4)(iii) and certification by the owner or operator that the control equipment meets the applicable specifications.

(iii) If performance tests are used, then a performance test plan as specified in 40 CFR 264.1035(b)(3) and all test results.

(iv) Information as required by 40 CFR 264.1035(c)(1) and 40 CFR 264.1035(c)(2), as applicable.

(v) An owner or operator shall record, on a semiannual basis, the information specified in paragraphs (e)(1)(v)(A) and (e)(1)(v)(B) of this section for those planned routine maintenance operations that would require the control device not to meet the requirements of Sec. 264.1087(c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this subpart, as applicable.

(A) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6-month period. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(B) A description of the planned routine maintenance that was performed for the control device during the previous 6-month period. This description shall include the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the requirements of Sec. 264.1087 (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this subpart, as applicable, due to planned routine maintenance.

(vi) An owner or operator shall record the information specified in paragraphs (e)(1)(vi)(A) through (e)(1)(vi)(C) of this section for those unexpected control device system malfunctions that would require the control device not to meet the requirements of Sec. 264.1087 (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this subpart, as applicable.

(a) The occurrence and duration of each malfunction of the control device system.

(b) The duration of each period during a malfunction when gases, vapors, or fumes are vented from the waste management unit through the closed-vent system to the control device while the control device is not properly functioning.

(c) Actions taken during periods of malfunction to restore a malfunctioning control device to its normal or usual manner of operation.

(vii) Records of the management of carbon removed from a carbon adsorption system conducted in accordance with Sec. 264.1087(c)(3)(ii) of this subpart.

(f) The owner or operator of a tank, surface impoundment, or container exempted from standards in accordance with the provisions of Sec. 264.1082(c) of this subpart shall prepare and maintain the following records, as applicable:

(1) For tanks, surface impoundments, or containers exempted under the hazardous waste organic concentration conditions specified in Sec. 264.1082 (c)(1) or (c)(2) of this subpart, the owner or operator shall record the information used for each waste determination (e.g., test results, measurements, calculations, and other documentation) in the facility operating log. If analysis results for waste samples are used for the waste determination, then the owner or operator shall record the date, time, and location that each waste sample is collected in accordance with applicable requirements of Sec. 264.1083 of this subpart.

(2) For tanks, surface impoundments, or containers exempted under the provisions of Sec. 264.1082(c)(2)(vii) or Sec. 264.1082(c)(2)(viii) of this subpart, the owner or operator shall record the identification number for the incinerator, boiler, or industrial furnace in which the hazardous waste is treated.

(g) An owner or operator designating a cover as ``unsafe to inspect and monitor" pursuant to Sec. 264.1084(l) or Sec. 264.1085(g) of this subpart shall record in a log that is kept in the facility operating record the following information: The identification numbers for waste management units with covers that are designated as ``unsafe to inspect and monitor," the explanation for each cover stating why the cover is unsafe to inspect and monitor, and the plan and schedule for inspecting and monitoring each cover.

(h) The owner or operator of a facility that is subject to this subpart and to the control device standards in 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, may elect to demonstrate compliance with the applicable sections of this subpart by documentation either pursuant to this subpart, or pursuant to the provisions of 40 CFR part 60, subpart VV or 40 CFR part 61, subpart V, to the extent that the documentation required by 40 CFR parts 60 or 61 duplicates the documentation required by this section.

(i) For each tank or container not using air emission controls specified in Secs. 264.1084 through 264.1087 of this subpart in accordance with the conditions specified in Sec. 264.1080(d) of this subpart, the owner or operator shall record and maintain the following information:

(1) A list of the individual organic peroxide compounds manufactured at the facility that meet the conditions specified in Sec. 264.1080(d)(1).

(2) A description of how the hazardous waste containing the organic peroxide compounds identified in paragraph (i)(1) of this section are managed at the facility in tanks and containers. This description shall include:

(i) For the tanks used at the facility to manage this hazardous waste, sufficient information shall be provided to describe for each tank: A facility identification number for the tank; the purpose and placement of this tank in the management train of this hazardous waste; and the procedures used to ultimately dispose of the hazardous waste managed in the tanks.

(ii) For containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to describe: A facility identification number for the container or group of containers; the purpose and placement of this container, or group of containers, in the management train of this hazardous waste; and the procedures used to ultimately dispose of the hazardous waste handled in the containers.

(3) An explanation of why managing the hazardous waste containing the organic peroxide compounds identified in paragraph (i)(1) of this section in the tanks and containers as described in paragraph (i)(2) of this section would create an undue safety hazard if the air emission controls, as required under Secs. 264.1084 through 264.1087 of this subpart, are installed and operated on these waste management units. This explanation shall include the following information:

(i) For tanks used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain: How use of the required air emission controls on the tanks would affect the tank design features and facility operating procedures currently used to prevent an undue safety hazard during the management of this hazardous waste in the tanks; and why installation of safety devices on the required air emission controls, as allowed under this subpart, will not address those situations in which evacuation of tanks equipped with these air emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides.

(ii) For containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain: How use of the required air emission controls on the containers would affect the container design features and handling procedures currently used to prevent an undue safety hazard during the management of this hazardous waste in the containers; and why installation of safety devices on the required air emission controls, as allowed under this subpart, will not address those situations in which evacuation of containers equipped with these air

emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides.

264.1090 Reporting requirements.

(a) Each owner or operator managing hazardous waste in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of Sec. 264.1082(c) of this subpart shall report to the Regional Administrator each occurrence when hazardous waste is placed in the waste management unit in noncompliance with the conditions specified in Sec. 264.1082 (c)(1) or (c)(2) of this subpart, as applicable. Examples of such occurrences include placing in the waste management unit a hazardous waste having an average VO concentration equal to or greater than 500 ppmw at the point of waste origination; or placing in the waste management unit a treated hazardous waste of which the organic content has been reduced by an organic destruction or removal process that fails to achieve the applicable conditions specified in Sec. 264.1082 (c)(2)(i) through (c)(2)(vi) of this subpart. The owner or operator shall submit a written report within 15 calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the EPA identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

(b) Each owner or operator using air emission controls on a tank in accordance with the requirements Sec. 264.1084(c) of this subpart shall report to the Regional Administrator each occurrence when hazardous waste is managed in the tank in noncompliance with the conditions specified in Sec. 264.1084(b) of this subpart. The owner or operator shall submit a written report within 15 calendar days of the time that the owner or operator becomes aware of the occurrence. The written report shall contain the EPA identification number, facility name and address, a description of the noncompliance event and the cause, the dates of the noncompliance, and the actions taken to correct the noncompliance and prevent recurrence of the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

(c) Each owner or operator using a control device in accordance with the requirements of Section 264.1087 of this subpart shall submit a semiannual written report to the Regional Administrator excepted as provided for in paragraph (d) of this section. The report shall describe each occurrence during the previous 6-month period when either: (1) A control device is operated continuously for 24 hours or longer in noncompliance with the applicable operating values defined in section 264.1035(c)(4) or (2) A flare is operated with visible emissions for 5 minutes or longer in a two-hour period, as defined in Section 264.1033(d). The written report shall include the EPA identification number, facility name and address, and an explanation why the control device could not be returned to compliance within 24 hours, and actions taken to correct the noncompliance. The report shall be signed and dated by an authorized representative of the owner or operator.

(d) A report to the Regional Administrator in accordance with the requirements of paragraph (c) of this section is not required for a 6-month period during which all control devices subject to this subpart are operated by the owner or operator such that (1) During no period of 24 hours or longer did a control device operate continuously in noncompliance with the applicable operating values defined in Section 264.1035(c)(4); and (2) no flare was operate with visible emissions for 5 minutes or longer in a two-hour period, as defined in 264.1033(d).

264.1091 Reserved

(y) 40 CFR 264.1100 through 264.1102 (Subpart DD), "Containment Buildings", are incorporated by reference including subsequent amendments and editions.

SUBPART DD - CONTAINMENT BUILDINGS

264.1100 Applicability

The requirements of this subpart apply to owners or operators who store or treat hazardous waste in units designed and operated under Section 264.1101 of this subpart. These provisions will become effective on February 18, 1993, although owner or operator may notify the Regional Administrator of his intent to be bound by this subpart at an earlier time. The owner or operator is not subject to the definition of land disposal in RCRA section 3004(k) provided that the unit:

(a) Is a completely enclosed, self-supporting structure that is designed and constructed of manmade materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls;
(b) Has a primary barrier that is designed to be sufficiently durable to withstand the movement of personnel, wastes, and handling equipment within the unit;
(c) If the unit is used to manage liquids, has:
    (1) A primary barrier designed and constructed of materials to prevent migration of hazardous constituents into the barrier;
    (2) A liquid collection system designed and constructed of materials to minimize the accumulation of liquid on the primary barrier; and
    (3) A secondary containment system designed and constructed of materials to prevent migration of hazardous constituents into the barrier, with a leak detection and liquid collection system capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest practicable time, unless the unit has been granted a variance from the secondary containment system requirements under Section 264.1101(b)(4);
(d) Has controls sufficient to prevent fugitive dust emissions to meet the no visible emission standard in Section 264.1101(c)(1)(iv); and
(e) Is designed and operated to ensure containment and prevent the tracking of materials from the unit by personnel or equipment.

264.1101 Design and Operating Standards

(a) All containment buildings must comply with the following design standards:
    (1) The containment building must be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, run-on), and to assure containment of managed wastes.
    (2) The floor and containment walls of the unit, including the secondary containment system if required under paragraph (b) of this section, must be designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls. The unit must be designed so that it has sufficient structural strength to prevent collapse or other failure. All surfaces to be in contact with hazardous wastes must be chemically compatible with those wastes. EPA will consider standards established by professional organizations generally recognized by the industry such as the American Concrete Institute (ACI) and the American Society of Testing Materials (ASTM) in judging the structural integrity requirements of this paragraph. If appropriate to the nature of the waste management operation to take place in the unit, an exception to the structural strength requirement may be made for light-weight doors and windows that meet these criteria;
        (i) They provide an effective barrier against fugitive dust emissions under paragraph (c)(1)(iv); and

(ii) The unit is designed and operated in a fashion that assures that wastes will not actually come in contact with these openings.

(3) Incompatible hazardous wastes or treatment reagents must not be placed in the unit or its secondary containment system if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail.

(4) A containment building must have a primary barrier designed to withstand the movement of personnel, waste, and handling equipment in the unit during the operating life of the unit and appropriate for the physical and chemical characteristics of the waste to be managed.

(b) For a containment building used to manage hazardous wastes containing free liquids or treated with free liquids (the presence of which is determined by the paint filter test, a visual examination, or other appropriate means), the owner or operator must include:

(1) A primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (e.g., a geomembrane covered by a concrete wear surface).

(2) A liquid collection and removal system to minimize the accumulation of liquid on the primary barrier of the containment building:

(i) The primary barrier must be sloped to drain liquids to the associated collection system; and

(ii) Liquids and waste must be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time.

(3) A secondary containment system including a secondary barrier designed and constructed to prevent migration of hazardous constituents into the barrier, and a leak detection system that is capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practicable time.

(i) The requirements of the leak detection component of the secondary containment system are satisfied by installation of a system that is, at a minimum:

(A) Constructed with a bottom slope of 1 percent or more; and

(B) Constructed of a granular drainage material with a hydraulic conductivity of 1×10^2 cm/sec or more and a thickness of 12 inches (30.5 cm) or more, or constructed of synthetic or geonet drainage materials with a transmissivity of 3×10^2 m^2/sec or more.

(ii) If treatment is to be conducted in the building, an area in which such treatment will be conducted must be designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building.

(iii) The secondary containment system must be constructed of materials that are chemically resistant to the waste and liquids managed in the containment building and of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building. (Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions. A containment building can serve as an external liner system for a tank, provided it meets the requirements of Section 264.193(d)(1). In addition, the containment building must meet the requirements of Section 264.193(b) and Sections 264.193(c)(1) and (2) to be considered an acceptable secondary containment system for a tank.)

(4) For existing units other than 90-day generator units, the Regional Administrator may delay the secondary containment requirement for up to two years, based on a demonstration by the owner or operator that the unit substantially meets the standards of this Subpart. In making this demonstration, the owner or operator must:

(i) Provide written notice to the Regional Administrator of their request request by November 16, 1992. This notification must describe the unit and its operating practices with specific reference to the performance of existing containment systems, and specific plans for retrofitting the unit with secondary containment;

(ii) Respond to any comments from the Regional Administrator on these plans within 30 days; and

(iii) Fulfill the terms of the revised plans, if such plans are approved by the Regional Administrator.

(c) Owners or operators of all containment buildings must:

(1) Use controls and practices to ensure containment of the hazardous waste within the unit; and, as a minimum:

(i) Maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier;

(ii) Maintain the level of the stored/treated hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded;

(iii) Take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste. An area must be designated to decontaminate equipment and any rinsate must be collected and properly managed; and

(iv) Take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions (see 40 CFR Part 60, Appendix A, Method 22-Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares). In addition, all associated particulate collection devices (e.g., fabric filter, electrostatic precipitator) must be operated and maintained with sound air pollution control practices (see 40 CFR part 60 subpart 292 for guidance). This state of no visible emissions must be maintained effectively at all times during routine operating and maintenance conditions, including when vehicles and personnel are entering and exiting the unit.

(2) Obtain certification by a qualified registered professional engineer that the containment building design meets the requirements of paragraphs (a) through (c) of this section. For units placed into operation prior to February 18, 1993, this certification must be placed in the facility's operating record (on-site files for generators who are not formally required to have operating records) no later than 60 days after the date of initial operation of the unit. After February 18, 1993, PE certification will be required prior to operation of the unit.

(3) Throughout the active life of the containment building, if the owner or operator detects a condition that could lead to or has caused a release of hazardous waste, must repair the condition promptly, in accordance with the following procedures.

(i) Upon detection of a condition that has led to a release of hazardous waste (e.g., upon detection of leakage from the primary barrier) the owner or operator must:

(A) Enter a record of the discovery in the facility operating record;

(B) Immediately remove the portion of the containment building affected by the condition from service;

(C) Determine what steps must be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs; and

(D) Within 7 days after the discovery of the condition, notify the Regional Administrator of the condition, and within 14 working days, provide a written notice to the Regional Administrator with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work.

(ii) The Regional Administrator will review the information submitted, make a determination regarding whether the containment building must be removed from service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing.

(iii) Upon completing all repairs and cleanup the owner or operator must notify the Regional Administrator in writing and provide a verification, signed by a qualified, registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with paragraph (c)(3)(i)(D) of this section.

(4) Inspect and record in the facility's operating record, at least once every seven days, data gathered from monitoring equipment and leak detection equipment as well as the containment building and the area immediately surrounding the containment building to detect signs of releases of hazardous waste.

(d) For containment buildings that contain areas both with and without secondary containment, the owner or operator must:

(1) Design and operate each area in accordance with the requirements enumerated in paragraphs (a) through (c) of this section;

(2) Take measures to prevent the release of liquids or wet materials into areas without secondary containment; and

(3) Maintain in the facility's operating log a written description of the operating procedures used to maintain the integrity of areas without secondary containment.

(e) Notwithstanding any other provision of this subpart the Regional Administrator may waive requirements for secondary containment for a permitted containment building where the owner operator demonstrates that the only free liquids in the unit are limited amounts of dust suppression liquids required to meet occupational health and safety requirements, and where containment of managed wastes and liquids can be assured without a secondary containment system.

264.1102 Closure and Post-closure Care

(a) At closure of a containment building, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.,) contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless Section 261.3(d) of this

chapter applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for containment buildings must meet all of the requirements specified in subparts G and H of this part.

(b) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in paragraph (a) of this section, the owner or operator finds that not all contaminated subsoils 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 (Section 264.310). In addition, for the purposes of closure, post-closure, and financial responsibility, such a containment building is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in subparts G and H of this part.

(z) Appendices to 40 CFR Part 264 are incorporated by reference including subsequent amendments and editions.

APPENDIX I TO PART 264 - RECORDKEEPING INSTRUCTIONS

The recordkeeping provisions of Section 264.73 specify that an owner or operator must keep a written operating record at his facility. This appendix provides additional instructions for keeping portions of the operating record. See Section 264.73(b) for additional recordkeeping requirements.

The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility in the following manner:

Records of each hazardous waste received, treated, stored, or disposed of at the facility which include the following:

(1) A description by its common name and the EPA Hazardous Waste Number(s) from Part 261 of this chapter which apply to the waste. The waste description also must include the waste's physical form, i.e., liquid, sludge, solid, or contained gas. If the waste is not listed in Part 261, Subpart D, of this chapter, the description also must include the process that produced it (for example, solid filter cake from production of, EPA Hazardous Waste Number W051).

Each hazardous waste listed in Part 261, Subpart D, of this chapter, and each hazardous waste characteristic defined in Part 261, Subpart C, of this chapter, has a four-digit EPA Hazardous Waste Number assigned to it. This number must be used for recordkeeping and reporting purposes. Where a hazardous waste contains more than one listed hazardous waste, or where more than one hazardous waste characteristic applies to the waste, the waste description must include all applicable EPA Hazardous Waste Numbers.

(2) The estimated or manifest-reported weight, or volume and density, where applicable, in one of the units of measure specified in Table 1;

TABLE 1

Unit of measure	Code 1
Gallons	G
Gallons per Hour	E
Gallons per Day	U
Liters	L
Liters per Hour	H
Liters per Day	V
Short Tons per Hour	D
Metric Tons per Hour	W
Short Tons per Day	N
Metric Tons per Day	S
Pounds per Hour	J
Kilograms per Hour	R
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
Btu's per Hour	I

[1]Single digit symbols are used here for data processing purposes.

(3) The method(s) (by handling code(s) as specified in Table 2) and date(s) of treatment, storage, or disposal.

TABLE 2 - HANDLING CODES FOR TREATMENT, STORAGE, AND DISPOSAL METHODS

Enter the handling code(s) listed below that most closely represents the technique(s) used at the facility to treat, store or dispose of each quantity of hazardous waste received:

1. **Storage**

S01 Container (barrel, drum, etc.)
S02 Tank
S03 Waste pile
S04 Surface impoundment
S05 Drip Pad
S06 Containment Building (Storage)
S99 Other Storage (specify)

2. **Treatment**

(a) **Thermal Treatment**

T06 Liquid injection incinerator
T07 Rotary kiln incinerator
T08 Fluidized bed incinerator
T09 Multiple hearth incinerator
T10 Infrared furnace incinerator
T11 Molten salt destructor
T12 Pyrolysis
T13 Wet Air oxidation
T14 Calcination
T15 Microwave discharge
T18 Other (specify)

(b) **Chemical Treatment**

T19 Absorption mound
T20 Absorption field
T21 Chemical fixation
T22 Chemical oxidation
T23 Chemical precipitation
T24 Chemical reduction
T25 Chlorination
T26 Chlorinolysis
T27 Cyanide destruction
T28 Degradation
T29 Detoxification
T30 Ion exchange
T31 Neutralization
T32 Ozonation
T33 Photolysis
T34 Other (specify)

(c) **Physical Treatment**

(1) **Separation of components**:

T35 Centrifugation
T36 Clarification
T37 Coagulation
T38 Decanting
T39 Encapsulation
T40 Filtration
T41 Flocculation
T42 Flotation
T43 Foaming
T44 Sedimentation
T45 Thickening
T46 Ultrafiltration
T47 Other (specify)

(2) **Removal of Specific Components:**

T48 Absorption-molecular sieve
T49 Activated carbon
T50 Blending
T51 Catalysis
T52 Crystallization
T53 Dialysis
T54 Distillation
T55 Electrodialysis
T56 Electrolysis
T57 Evaporation
T58 High gradient magnetic separation
T59 Leaching
T60 Liquid ion exchange
T61 Liquid-liquid extraction
T62 Reverse osmosis
T63 Solvent recovery
T64 Stripping
T65 Sand filter
T66 Other (specify)

(d) **Biological Treatment**

T67 Activated sludge
T68 Aerobic lagoon
T69 Aerobic tank
T70 Anserobic tank
T71 Composting
T72 Septic tank
T73 Spray irrigation
T74 Thickening filter
T75 Tricking filter
T76 Waste stabilization pond
T77 Other (specify)
T78 [Reserved]
T79 [Reserved]

(e) Boilers and Industrial Furnaces

T80 Boiler
T81 Cement Kiln
T82 Lime Kiln
T83 Aggregate Kiln
T84 Phosphate Kiln
T85 Coke Oven
T86 Blast Furnace
T87 Smelting, Melting, or Refining Furnace
T88 Titanium Dioxide Chloride Process Oxidation Reactor
T89 Methane Reforming Furnace
T90 Pulping Liquor Recovery Furnace
T91 Combustion Device Used in the Recovery of Sulfur Values from Spent Sulfuric Acid
T92 Halogen Acid Furnaces
T93 Other Industrial Furnaces Listed in 40 CFR 260.10 (specify)

(f) Other Treatment

T94 Containment Building (Treatment)

3. **Disposal**

D79 Underground Injection
D80 Landfill

D81 Land treatment
D82 Ocean disposal
D83 Surface Impoundment (to be closed as a landfill)
D99 Other Disposal (specify)

4. **Miscellaneous (Subpart X)**
X01 Open Burning/Open Detonation
X02 Mechanical Processing
X03 Thermal Unit
X04 Geologic Repository
X99 Other Subpart X (specify)

APPENDIX II [Reserved]
APPENDIX III [Reserved]

APPENDIX IV - COCHRAN'S APPROXIMATION TO THE BEHRENS-FISHER STUDENTS' T-TEST

Using all the available background data (n_b readings), calculate the background mean (X_B) and background variance (S_B^2). For the single monitoring well under investigation (n_m reading), calculate the monitoring mean (X_m) and monitoring variance (S_m^2).

For any set of data ($X_1, X_2 ..., X_n$) the mean is calculated by:

$$\tilde{X} = \frac{X_1 + X_2 \ldots + X_n}{n}$$

and the variance is calculated by:

$$s^2 = \frac{(X_1 - \tilde{X})^2 + (X_2 - \tilde{X})^2 \ldots + (X_n - \tilde{X})^2}{n-1}$$

where "n" denotes the number of observations in the set of data.

The t-test uses these data summary measures to calculate a t-statistic (t*) and a comparison t-statistic (t_c). the t* value is compared to the t_c value and a conclusion reached as to whether there has been a statistically significant change in any indicator parameter.

The t-statistic for all parameters except pH and similar monitoring parameters is:

$$t^* = \frac{X_m - \bar{X}_s}{\sqrt{\frac{S_m^2}{n_m} + \frac{S_b^2}{n_b}}}$$

If the value of this t-statistic is negative then there is no significant difference between the monitoring data and background data. It should be noted that significantly small negative values may be indicative of a failure of the assumption made for test validity or errors have been made in collecting the background data.

The t-statistic (t_c), against which t* will be compared, necessitates finding t_b and t_m from standard (one-tailed) tables where,

t_b = t-tables with (n_b - 1) degrees of freedom at the 0.05 level of significance.
t_m = t-tables with (n_m - 1) degrees of freedom at the 0.05 level of significance.

Finally, the special weightings: W_b and W_m are defined as:

$$W_B = \frac{S_b^2}{n_b} \text{ and } W_m = \frac{S_m^2}{n_m}$$

and so the comparison t-statistic is:

$$t_c = \frac{W_b t_b + W_m t_m}{W_b + W_m}$$

The t-statistic (t*) is now compared with the comparison t-statistic (t_c) using the following decision-rule:

If *t* is equal to or larger than* t_c, then conclude that there most likely *has been a significant increase* in this specific parameter.

If *t* is less than* t_c, then conclude that most likely *there has not been a change* in this specific parameter.

The t-statistic for testing pH and similar monitoring parameters is constructed in the same manner as previously described except the negative sign (if any) is discarded and the caveat concerning the negative value is ignored. The standard (two-tailed) tables are used in the construction t_c for pH and similar monitoring parameters.

If t* is equal to or larger than t_c, then conclude that there most likely *has been a significant increase* (if the initial t* had been negative, this would imply a significant decrease). If t* is less than t_c, then conclude that there most likely has been no change.

A further discussion of he test may be found in *Statistical Methods* (6th edition, Section 4.14) by G. W. Snedecor and W. G. Cochran, or *Principles and Procedures of Statistics* (1st edition, Section 5.8) by R. G. D. Steel and J. H. Torrie.

STANDARD T-TABLES 0.05 LEVEL OF SIGNIFICANCE

Degrees of Freedom	T-Values (One-tail)	T-Values (Two-tail)
1	6.314	12.706
2	2.920	4.303
3	2.353	3.182
4	2.132	2.776
5	2.015	2.571
6	1.943	2.447
7	1.895	2.365
8	1.860	2.306
9	1.833	2.262
10	1.812	2.228
11	1.796	2.201
12	1.782	2.179
13	1.771	2.160
14	1.761	2.145
15	1.753	2.131
16	1.746	2.120
17	1.740	2.110
18	1.734	2.101
19	1.729	2.093
20	1.725	2.086
21	1.721	2.080
22	1.717	2.074
23	1.714	2.069
24	1.711	2.064
25	1.708	2.060
30	1.697	2.042
40	1.684	2.021

Adopted from Table III of Statistical Tables for Biological, Agricultural, and Medical Research (1947, R. A. Fisher and F. Yates).

APPENDIX V - EXAMPLES OF POTENTIALLY INCOMPATIBLE WASTE

Many hazardous wastes, when mixed with other waste or materials at a hazardous waste facility, can produce effects which are harmful to human health and the environment, such as (1) heat or pressure, (2) fire or explosion, (3) violent reaction, (4) toxic dusts, mists, fumes, or gases, or (5) flammable fumes or gases.

Below are examples of potentially incompatible wastes, waste components, and materials, along with the harmful consequences which result from mixing materials in one group with materials in another group. The list is intended as a guide to owners or operators of treatment, storage, and disposal facilities, and to enforcement and permit granting officials, to indicate the need for special precautions when managing these potentially incompatible waste materials or components.

This list is not intended to be exhaustive. An owner or operator must, as the regulations require, adequately analyze his wastes so that he can avoid creating uncontrolled substances or reactions of the type listed below, whether they are listed below or not. It is possible for potentially incompatible,e wastes to be mixed in a way that precludes a reaction (e.g., adding acid to water rather than water to acid) or that neutralizes them (e.g., a strong acid mixed with a strong base), or that controls substances produced (e.g., by generating flammable gases in a closed tank equipped so that ignition cannot occur, and burning the gases in an incinerator).

In the lists below, the mixing of a Group A material with a Group B material may have the potential consequences as noted.

GROUP 1-A

Acetylene sludge
Alkaline caustic liquids
Alkaline cleaner
Alkaline corrosive liquids
Alkaline corrosive battery fluid
Caustic wastewater
Lime sludge and other corrosive alkalines
Lime wastewater
Lime and water
Spent caustic

GROUP 1-B

Acid sludge
Acid and water
Battery acid
Chemical cleaners
Electrolyte acid
Etching acid liquid or solvent
Pickling liquor and other corrosive acids
Spent acid
Spent mixed acid
Spent sulfuric acid

Potential consequences: Head generation; violent reaction.

GROUP 2-A

Aluminum
Beryllium
Calcium
Lithium
Magnesium
Potassium
Sodium

Zinc powder
Other reactive metals and metal hydrides

GROUP 2-B

Any waste in Group 1-A or 1-B

Potential consequences: Fire or explosion; generation of flammable hydrogen gas.

GROUP 3-A

Alcohols
Water

GROUP 3-B

Any concentrated waste in Groups 1-A or 1-B
Calcium
Lithium
Metal hydrides
Potassium
SO_2Cl_2, PCl_3, CH_3SiCl_3
Other water-reactive waste

Potential consequences: Fire, explosion, or heat generation; generation of flammable or toxic gases.

GROUP 4-A

Alcohols
Aldehydes
Halogenated Hydrocarbons
Nitrated hydrocarbons
Unsaturated hydrocarbons
Other reactive organic compounds and solvents

GROUP 4-B

Concentrated Group 1-A or 1-B wastes
Group 2-A wastes

Potential consequences: Fire, explosion, or violent reaction.

GROUP 5-A

Spent cyanide and sulfide solutions

GROUP 5-B

Group 1-B wastes

Potential consequences: Generation of toxic hydrogen cyanide or hydrogen sulfide gas.

GROUP 6-A

Chlorates
Chlorine
Chlorites
Chromic acid
Hypochlorites

Nitrates
Nitric acid, fuming
Perchlorates
Permanganates
Peroxides
Other strong oxidizers

GROUP 6-B

Acetic acid and other organic acids
Concentrated mineral acids
Group 2-A wastes
Group 4-A wastes
Other flammable and combustible wastes

Potential consequences: Fire, explosion, or violent reaction.
Source: "Law, Regulations, and Guidelines for Handling of Hazardous Waste." California Department of Health, February, 1975.

APPENDIX IX--GROUND-WATER MONITORING LIST[1]

Common name[2]	CAS RN[3]	Chemical abstracts service index name[4]	Suggested methods[5]	PQL (mg/L)[6]
Acenaphthene	83-32-9	Acenaphthylene, 1,2-dihydro	8100	200
			8270	10
Acenaphthylene	208-96-8	Acenaphthylene	8100	200
			8270	10
Acetone	67-64-1	2-Propanone	8240	100
Acetophenone	98-86-2	Ethanone, 1-phenyl-	8270	10
Acetonitrile; Methyl cyanide	75-05-8	Acetonitrile	8015	100
2-Acetylaminofluorene; 2-AAF	53-96-3	Acetamide, N-9H-fluoren-2-yl	8270	10
Acrolein	107-02-8	2-Propenal	8030	5
			8240	5
Acrylonitrile	107-13-1	2-Propenenitrile	8030	5
			8240	5
Aldrin	309-00-2	1,4:5,8-Dimethanonaphthalene 1,2,3,4,	8080	0.05
		10,10-hexachloro-1,4,4a,5,8,8a-	8270	10
		hexahydro-(1μ,4μ,4ab,5μ,8μ,8ab)-		
Allyl chloride	107-05-1	1-Propene, 3-chloro-	8010	5
			8240	100
4-Aminobiphenyl	92-67-1	[1,1'-Biphenyl]-4-amine	8270	10
Aniline	62-53-3	Benzenamine	8270	10
Anthracene	120-12-7	Anthracene	8100	200
			8270	10
Antimony	(Total)	Antimony	6010	300
			7040	2,000
			7041	30
Aramite	140-57-8	Sulfurous acid, 2-chloroethyl 2-[4-	8270	10
		(1,1-dimethylethyl)phenoxy]-1-		
		methylethyl ester		
Arsenic	(Total)	Arsenic	6010	500
			7060	10
			7061	20
Barium	(Total)	Barium	6010	20

APPENDIX IX--GROUND-WATER MONITORING LIST[1]

Common name[2]	CAS RN[3]	Chemical abstracts service index name[4]	Suggested methods[5]	PQL (mg/L)[6]
			7080	1,000
Benzene	71-43-2	Benzene	8020	2
			8240	5
Benzo[a]anthracene; Benzanthracene	56-55-3	Benz[a]anthracene	8100	200
			8270	10
Benzo[b]fluoranthene	205-99-2	Benz[e]acephenanthrylene	8100	200
			8270	10
Benzo[k]fluoranthene	207-08-9	Benzo[k]fluoranthene	8100	200
			8270	200
			8270	10
Benzo[a]pyrene	50-32-8	Benzo[a]pyrene	8100	200
			8270	10
Benzyl alcohol	100-51-6	Benzenemethanol	8270	20
Berylium	(Total)	Beryllium	6010	3
			7090	50
			7091	2
alpha-BHC	319-84-6	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1μ,2μ,3b,4μ,5b,6b)-	8080	0.05
			8250	10
beta-BHC	319-85-7	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1μ,2b,3μ,4b,5μ,6b)-	8080	0.05
			8250	40
delta-BHC	319-86-8	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1μ,2μ 3μ,4b,5μ,6b)-	8080	0.1
			8250	30
gamma-BHC; Lindane	58-89-9	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1μ,2μ,3b,4μ,5μ,6b)-	8080	0.05
			8250	10
Bis(2-chloroethoxy)methane	111-91-1	Ethane, 1,1'-[methylenebis (oxy)] bis[2-chloro	8270	10
Bis(2-chloroethyl)ether	111-44-4	Ethane, 1,1'-oxybis[2-chloro-	8270	10
Bis(2-chloro- 1-methylethyl) ether; 2,2'-Di-chlorodiisopropyl ether	108-60-1	Propane, 2,2'-oxybis[1-chloro-	8010	100
			8270	10
Bis(2-ethylhexyl) phthalate	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl)ester	8060	20
			8270	10
Bromodichloromethane	75-27-4	Methane, bromodichloro	8010	1
			8240	5
Bromoform; Tribromomethane	75-25-2	Methane, tribromo-	8010	2
			8240	5
4-Bromophenyl phenyl ether	101-55-3	Benzene, 1-bromo-4-phenoxy-	8270	10
Butyl benzyl phthalate: Benzyl butyl phthalate	85-68-7	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester	8060	5
			8270	10
Cadmium	(Total)	Cadmium	6010	40
			7130	50
			7131	1
Carbon disulfide	75-15-0	Carbon disulfide	8240	5
Carbon tetrachloride	56-23-5	Methane, tetrachloro-	8010	1
			8240	5
Chlordane	57-74-9	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a-hexahydro-	8080	0.1
			8250	10
p-Chloroaniline	106-47-8	Benzenamine, 4-chloro-	8270	20
Chlorobenzene	108-90-8	Benzene, chloro-	8010	2
			8020	2

APPENDIX IX--GROUND-WATER MONITORING LIST[1]

Common name[2]	CAS RN[3]	Chemical abstracts service index name[4]	Suggested methods[5]	PQL (mg/L)[6]
			8240	5
Chlorobenzilate	510-15-6	Benzeneacetic acid, 4-chloro-μ-(4-chlorophenyl)-μ-hydroxy-ethyl ester	8270	10
p-Chloro-m-cresol	59-50-7	Phenol, 4-chloro-3-methyl-	8040	5
			8270	20
Chloroethane: Ethyl chloride	75-00-3	Ethane, chloro	8010	5
			8240	10
Chloroform	67-66-3	Methane, trichloro	8010	0.5
			8240	5
2-Chloronaphthalene	91-58-7	Naphthalene, 2-chloro	8120	10
			8270	10
2-Chlorophenol	95-57-8	Phenol, 2-chloro	8040	5
			8270	10
4-Chlorophenyl phenyl ether	7005-72-3	Benzene, 1-chloro-4-phenoxy-	8270	10
Chloroprene	126-99-8	1,3-Butadiene, 2-chloro-	8010	50
			8240	5
Chromium	(Total)	Chromium	6010	70
			7190	500
			7191	10
Chrysene	218-01-9	Chrysene	8100	200
			8270	10
Cobalt	(Total)	Cobalt	6010	70
			7200	500
			7201	10
Copper	(Total)	Copper	6010	60
			7210	200
m-Cresol	108-39-4	Phenol, 3-methyl-	8270	10
o-Cresol	95-48-7	Phenol, 2-methyl-	8270	10
p-Cresol	106-44-5	Phenol, 4-methyl-	8270	10
Cyanide	57-12-5	Cyanide	9010	40
2,4-D: 2,4-Dichlorophenoxy-acetic acid	94-75-7	Acetic acid, (2,4-dichlorophenoxy)-	8150	10
4,4'-DDD	72-54-8	Benzene 1,1'-(2,2-dichloroethylidene) bis[4-chloro-	8080	0.1
			8270	10
4,4'-DDE	72-55-9	Benzene 1,1'-(dichloroethylidene) bis[4-chloro	8080	0.05
			8270	10
4,4'-DDT	50-29-3	Benzene 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-	8080	0.1
			8270	10
Diallate	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-S- (2,3-dichloro-2- propenyl) ester	8270	10
Dibenz[a,h]anthracene	53-70-3	Dibenz[a,h]anthracene	8100	200
			8270	10
Dibenzofuran	132-64-9	Dibenzofuran	8270	10
Dibromochloromethane; -Chlorodibromomethane	124-48-1	Methane,dibromochloro	8010	1
			8240	5
1,2-Dibromo-3-chloropropane: DBCP	96-12-8	Propane, 1,2-dibromo-3-chloro-	8010	100
			8240	5
			8270	10
1,2-Dibromoethane: Ethylene dibromide	106-93-4	Ethane, 1,2-dibromo	8010	10

APPENDIX IX--GROUND-WATER MONITORING LIST[1]

Common name[2]	CAS RN[3]	Chemical abstracts service index name[4]	Suggested methods[5]	PQL (mg/L)[6]
			8240	5
Di-n-butyl phthalate	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester	8060	5
			8270	10
o-Dichlorobenzene	95-50-1	Benzene, 1,2-dichloro-	8010	2
			8020	5
			8120	10
			8270	10
m-Dichlorobenzene	541-73-1	Benzene, 1,3-dichloro-	8010	5
			8020	5
			8120	10
			8270	10
p-Dichlorobenzene	106-46-7	Benzene, 1,4-dichloro-	8010	2
			8020	5
			8120	15
			8270	10
3,3'-Dichlorobenzidine	91-94-1	[1,1'-Biphenyl]-4,4'-diamine, 3,3'- dichloro-	8270	20
trans-1,4-Dichloro-2-butene	110-57-6	2-Butene, 1,4-dichloro-, (E)-	8240	5
Dichlorodifluoromethane	75-71-8	Methane, dichlorodifluoro-	8010	10
			8240	5
1,1-Dichloroethane	75-34-3	Ethane, 1,1-dichloro-	8010	1
			8240	5
1,2-Dichloroethane;Ethylene dichloride	107-06-2	Ethane, 1,2-dichloro-	8010	0.5
			8240	5
1,1-Dichloroethylene; Vinylidene chloride	75-35-4	Ethene, 1,1-dichloro-	8010	1
			8240	5
trans-1,2-Dichloroethylene	156-60-5	Ethene, 1,2-dichloro-, (E)-	8010	1
			8240	5
2,4-Dichlorophenol	120-83-2	Phenol, 2,4-dichloro-	8040	5
			8270	10
2,6-Dichlorophenol	87-65-0	Phenol, 2,6-dichloro-	8270	10
1,2-Dichloropropane	78-87-5	Propane, 1,2-dichloro-	8010	0.5
			8240	5
cis-1,3-Dichloropropene	10061-01-5	1-Propene, 1,3-dichloro-, (Z)-	8010	20
			8240	5
trans-1,3-Dichloropropene	10061-02-6	1-Propene, 1,3-dichloro-, (E)-	8010	5
			8240	5
Dieldrin	60-57-1	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6, 6a,7,7a-octahydro-, 1aμ,2b,2aμ,3b, 6b,6aμ,7b,7aμ)-	8080	0.05
			8270	10
Diethyl phthalate	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester	8060	5
			8270	10
O,O-Diethyl O-2-pyrazinyl phosphorothioate: Thionazin	297-97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	8270	10
Dimethoate	60-51-5	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester	8270	10
p-(Dimethylamino)azobenzene	60-11-7	Benzenamine, N,N-dimethyl-4 -(phenylazo)	8270	10
7,12-Dimethylbenz[a]anthracene	57-97-6	Benz[a]anthracene, 7,12-dimethyl-	8270	10
3,3'-Dimethylbenzidine	119-93-7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'- dimethyl-	8270	10

Common name[2]	CAS RN[3]	Chemical abstracts service index name[4]	Suggested methods[5]	PQL (mg/L)[6]
alpha, alpha-Dimethylphenethylamine	122-09-8	Benzeneethanamine, μ,μ-dimethyl-	8270	10
2,4-Dimethylphenol	105-67-9	Phenol, 2,4-dimethyl-	8040	5
			8270	10
Dimethyl phthalate	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester	8060	5
			8270	10
m-Dinitrobenzene	99-65-0	Benzene, 1,3-dinitro-	8270	10
4,6-Dinitro-o-cresol	534-52-1	Phenol, 2-methyl-4,6-dinitro-	8040	150
			8270	50
2,4-Dinitrophenol	51-28-5	Phenol, 2,4-dinitro-	8240	150
			8270	50
2,4-Dinitrotoluene	121-14-2	Benzene, 1-methyl-2,4-dinitro-	8090	0.2
			8270	10
2,6-Dinitrotoluene	606-20-2	Benzene, 2-methyl-1,3-dinitro-	8090	0.1
			8270	10
Dinoseb; DNBP; 2-sec-Butyl-4,6-dinitrophenol	88-85-7	Phenol, 2-(1-methylpropyl)-4,6-dinitro-	8150	1
			8270	10
Di-n-octyl phthalate	117-84-0	1,2-Benzenedicarboxylic acid, dioctyl ester	8060	30
			8270	10
1,4-Dioxane	123-91-1	1,4-Dioxane	8015	150
Diphenylamine	122-39-4	Benzenamine, N-phenyl-	8270	10
Disulfoton	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)- [2-ethyl]ester	8140	2
			8270	10
Endosulfan I	959-98-8	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6, 9,9a-hexahydro-, 3-oxide, (3μ,5ab, 6μ,9μ,9ab)-	8080	0.1
			8250	10
Endosulfan II	33213-65-9	6,9-Methano-2,4,3-benzodioxathiepin,6, 7,8,9,10,10-hexachloro- 1,5,5a 6,9, 9a-hexahydro- 3-oxide, (3μ,5aμ,6b,9b 9aμ).	8080	0.05
Endosulfan sulfate	1031-07-8	6,9,Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro- 1,5,5a, 6,9,9a-hexahydro-, 3,3-dioxide.	8080	0.5
			8270	10
Endrin	72-20-8	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6, 6a,7,7a-octahydro-, (1aμ,2b,2ab,3μ 6μ, 6ab,7b,7aμ)-	8080	0.1
			8250	10
Endrin aldehyde	7421-93-4	1,2,4-Methenocyclopenta(cd)pentalene -5-carboxaldehyde, 2,2a,3,3,4,7-hexachlorodecahydro-, (1μ,2b,2ab,4b,4ab, 5b,6ab,6bb,7R*)-	8080	0.2
			8270	10
Ethylbenzene	100-41-4	Benzene, ethyl-	8020	2
			8240	5
Ethyl methacrylate	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester	8015	10
			8240	5
			8270	10
Ethyl methanesulfonate	62-50-0	Methanesulfonic acid, ethyl ester	8270	10
Famphur	52-85-7	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl]-O,O-dimethyl ester	8270	10
Fluoranthene	206-44-0	Fluoranthene	8100	200
			8270	10
Fluorene	86-73-7	9H-Fluorene	8100	200
			8270	10

Common name[2]	CAS RN[3]	Chemical abstracts service index name[4]	Suggested methods[5]	PQL (mg/L)[6]
Heptachlor	76-44-8	4,7-Methano- 1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a,tetrahydro-	8080	0.05
			8270	10
Heptachlor epoxide	1024-57-3	2,5-Methano-2H-indeno[1,2-b]oxirene, 2,3,4,5,6,7,7-heptachloro- 1a,1b,5, 5a,6,6a,-hexahydro-, (1aμ,1bb,2μ, 5μ,5ab,6b,6aμ)	8080	1
			8270	10
Hexachlorobenzene	118-74-1	Benzene, hexachloro-	8120	0.5
			8270	10
Hexachlorobutadiene	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro	8120	5
			8270	10
Hexachlorocyclopentadiene	77-47-4	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	8120	5
			8270	10
Hexachloroethane	67-72-1	Ethane, hexachloro-	8120	0.5
			8270	10
Hexachlorophene	70-30-4	Phenol, 2,2'-methylenebis[3,4,6-trichloro-	8270	10
Hexachloropropene	1888-71-7	1-Propene, 1,1,2,3,3,3-hexachloro-	8270	10
2-Hexanone	591-78-6	2-Hexanone	8240	50
Indeno(1,2,3-cd)pyrene	193-39-5	Indeno[1,2,3-cd]pyrene	8100	200
			8270	10
Isobutyl alcohol	78-83-1	1-Propanol, 2-methyl-	8015	50
Isodrin	465-73-6	1,4,5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a hexahydro-(1μ,4μ,4ab,5b,8b,8ab)-	8270	10
Isophorone	78-59-1	2-Cyclohexen-1-one,3,5,5-trimethyl-	8090	60
			8270	10
Isosafrole	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)-	8270	10
Kepone	143-50-0	1,3,4-Metheno-2H-cyclobuta- [cd]pentalen-2-one, 1,1a,3,3a,4,5,5,5a,5b, 6-decachloroctahydro-	8270	10
Lead	(Total)	Lead	6010	40
			7420	1,000
			7421	10
Mercury	(Total)	Mercury	7470	2
Methacrylonitrile	126-98-7	2-Propenenitrile, 2-methyl-	8015	5
			8240	5
Methapyrilene	91-80-5	1,2,Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2,thien-yimethyl)-	8270	10
Methoxychlor	72-43-5	Benzene, 1,1'-(2,2,2,trichloroethylidene)bis[4-methoxy	8080	2
			8270	10
Methyl bromide; Bromomethane	74-83-9	Methane, bromo	8010	20
			8240	10
Methyl chloride; Chloromethane	74-87-3	Methane, chloro-	8010	1
			8240	10
3-Methylcholanthrene	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	8270	10
Methylene bromide; Dibromomethane	74-95-3	Methane, dibromo-	8010	15
			8240	5
Methylene chloride; Dichloromethane	75-09-2	Methane, dichloro-	8010	5
			8240	5
Methylethyl ketone, MEK	78-93-3	2-Butanone	8015	10
			8240	100
Methyl iodide; Iodomethane	74-88-4	Methane, iodo-	8010	40
			8240	5
Methyl methacrylate	80-62-6	2-Propenoic acid, 2-methyl-, methyl ester	8015	2

APPENDIX IX--GROUND-WATER MONITORING LIST[1]

Common name[2]	CAS RN[3]	Chemical abstracts service index name[4]	Suggested methods[5]	PQL (mg/L)[6]
			8240	5
Methyl methanesulfonate	66-27-3	Methanesulfonic acid, methyl ester	8270	10
2-Methylnaphthalene	91-57-6	Naphthalene, 2-methyl-	8270	10
Methyl parathion; Parathion methyl	298-00-0	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester	8140	0.5
			8270	10
4-Methyl-2-pentanone; Methyl isobutyl ketone	108-10-1	2-Pentanone, 4-methyl	8015	5
			8240	50
Naphthalene	91-20-3	Naphthalene	8100	200
			8270	10
1,4-Naphthoquinone	130-15-4	1,4-Naphthalenedione	8270	10
1-Naphthylamine	134-32-7	1,Naphthalenamine	8270	10
2-Naphthylamine	91-59-8	2-Naphthalenamine	8270	10
Nickel	Nickel	6010	50	
			7520	400
o-Nitroaniline	88-74-4	Benzenamine, 2-nitro-	8270	50
m-Nitroaniline	99-09-2	Benzenamine, 3-nitro-	8270	50
p-Nitroaniline	100-01-6	Benzenamine, 4-nitro-	8270	50
Nitrobenzene	98-95-3	Benzene, nitro-	8090	40
			8270	10
o-Nitrophenol	88-75-5	Phenol, 2-nitro-	8040	5
			8270	10
p-Nitrophenol	100-02-7	Phenol, 4-nitro-	8040	10
			8270	50
4-Nitroquinoline 1-oxide	56-57-5	Quinoline, 4-nitro-, 1-oxide	8270	10
N-Nitrosodi-n-butylamine	924-16-3	1-Butanamine, N-butyl-N-nitroso-	8270	10
N-Nitrosodiethylamine	55-18-5	Ethanamine, N-ethyl-N-nitroso-	8270	10
N-Nitrosodimethylamine	62-75-9	Methanamine, N-methyl-N-nitroso-	8270	10
N-Nitrosodiphenylamine	86-30-6	Benzenamine, N-nitroso-N-phenyl-	8270	10
N-Nitrosodipropylamine; Di-n-propylnitrosamine	621-64-7	1,Propanamine, N-nitroso-N-propyl-	8270	10
N-Nitrosomethylethylamine	10595-95-6	Ethanamine, N-methyl-N-nitroso-	8270	10
N-Nitrosomorpholine	59-89-2	Morpholine, 4-nitroso-	8270	10
N-Nitrosopiperidine	100-75-4	Piperidine, 1-nitroso-	8270	10
N-nitrosopyrrolidine	930-55-2	Pyrrolidine, 1-nitroso-	8270	10
5-Nitro-o-toluidine	99-55-8	Benzenamine, 2-methyl-5-nitro-	8270	10
Parathion	56-38-2	Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl) ester	8270	10
Polychlorinated biphenyls;PCBs	See Note 7	1,1'-Biphenyl, chloro derivatives	8080	50
			8250	100
Polychlorinated dibenzo-p-dioxins; PCDDs	See Note 8	Dibenzo[b,e][1,4]dioxin, chloro derivatives	8280	0.01
Polychlorinated dibenzofurans; PCDFs	See Note 9	Dibenzofuran, chloro derivatives	8280	0.01
Pentachlorobenzene	608-93-5	Benzene, pentachloro-	8270	10
Pentachloroethane	76-01-7	Ethane, pentachloro-	8240	5
			8270	10
Pentachloronitrobenzene	82-68-8	Benzene, pentachloronitro-	8270	10
Pentachlorophenol	87-86-5	Phenol, pentachloro-	8040	5
			8270	50
Phenacetin	62-44-2	Acetamide, N-(4-ethoxyphenyl)	8270	10
Phenanthrene	85-01-8	Phenanthrene	8100	200
			8270	10
Phenol	108-95-2	Phenol	8040	1
			8270	10
p-Phenylenediamine	106-50-3	1,4-Benzenediamine	8270	10
Phorate	298-02-2	Phosphorodithioic acid, O,O-diethyl	8140	2

Common name[2]	CAS RN[3]	Chemical abstracts service index name[4]	Suggested methods[5]	PQL (mg/L)[6]
		S-[(ethylthio)methyl] ester	8270	10
2-Picoline	109-06-8	Pyridine, 2-methyl-	8240	5
			8270	10
Pronamide	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)	8270	10
Propionitrile; Ethyl cyanide	107-12-0	Propanenitrile	8015	60
			8240	5
Pyrene	129-00-0	Pyrene | 8100	200	
			8270	10
Pyridine	110-86-1	Pyridine	8240	5
			8270	10
Safrole	94-59-7	1,3-Benzodioxole, 5-(2-propernyl)-	8270	10
Selenium	(Total)	Selenium	6010	750
			7740	20
			7741	20
Silver	(Total)	Silver	6010	70
			7760	100
Silvex; 2,4,5-TP	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-	8150	2
Styrene	100-42-5	Benzene, ethenyl-	8020	1
			8240	5
Sulfide	18496-25-8	Sulfide	9030	10,000
2,4,5-T;2,4,5-Trichlorophenoxyacetic acid	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-	8150	2
2,3,7,8-TCDD; 2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-	8280	0.005
1,2,4,5-Tetrachlorobenzene	95-94-3	Benzene, 1,2,4,5-tetrachloro-	8270	10
1,1,1,2-Tetrachloroethane	630-20-6	Ethane, 1,1,1,2-tetrachloro-	8010	5
			8240	5
1,1,2,2-Tetrachloroethane	79-34-5	Ethane, 1,1,2,2-tetrachloro-	8010	0.5
			8240	5
Tetrachloroethylene;Perchloroethylene; Tetrachloroethene	127-18-4	Ethene, tetrachloro-	8010	0.5
			8240	5
2,3,4,6-Tetrachlorophenol	58-90-2	Phenol, 2,3,4,6-tetrachloro-	8270	10
Tetraethyl dithiopyrophosphate Sulfotepp	3689-24-5	Thiodiphosphoric acid([(HO)$_2$;P(s)]$_2$O), tetraethyl ester	8270	10
Thallium	(Total)	Thallium	6010	400
			7840	1,000
			7841	10
Tin	(Total)	Tin	7870	8,000
Toluene	108-88-3	Benzene, methyl-	8020	2
			8240	5
o-Toluidine	95-53-4	Benzenamine, 2-methyl-	8270	10
Toxaphene	8001-35-2	Toxaphene	8080	2
			8250	10
1,2,4-Trichlorobenzene	120-82-1	Benzene, 1,2,4-trichloro-	8270	10
1,1,1-Trichloroethane; Methylchloroform	71-55-6	Ethane, 1,1,1-trichloro-	8240	5
1,1,2-Trichloroethane	79-00-5	Ethane, 1,1,2-trichloro-	8010	0.2
			8240	5
Trichloroethylene, Trichloroethene	79-01-6	Ethene, trichloro-	8010	1
			8240	5
Trichlorofluoromethane	75-69-4	Methane, trichlorofluoro-	8010	10
			8240	5
2,4,5-Trichlorophenol	95-95-4	Phenol, 2,4,5-trichloro-	8270	10
2,4,6-Trichlorophenol	88-06-2	Phenol, 2,4,6-trichloro-	8040	5

APPENDIX IX--GROUND-WATER MONITORING LIST[1]

Common name[2]	CAS RN[3]	Chemical abstracts service index name[4]	Suggested methods[5]	PQL (mg/L)[6]
			8270	10
1,2,3-Trichloropropane	96-18-4	Propane, 1,2,3-trichloro-	8010	10
			8240	5
O,O,O-Triethyl phosphorothioate	126-68-1	Phosphorothioic acid, O,O,O-triethyl ester	8270	10
sym-Trinitrobenzene	99-35-4	Benzene, 1,3,5-trinitro-	8270	10
Vanadium	(Total)	Vanadium	6010	80
			7910	2,000
			7911	40
Vinyl acetate	108-05-4	Acetic acid, ethenyl ester	8240	5
Vinyl chloride	75-01-4	Ethene, chloro-	8010	2
			8240	10
Xylene (total)	1330-20-7	Benzene, dimethyl-	8020	5
			8240	5
Zinc	(Total)	Zinc	6010	.20
			7950	50

1 The regulatory requirements pertain only to the list of substances; the right hand columns (Methods and PQL) are given for informational purposes only. See also footnotes 5 and 6.

2 Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

3 Chemical Abstracts Service registry number. Where "Total" is entered, all species in the ground water that contain this element are included.

4 CAS index names are those used in the 9th Cumulative Index.

5 Suggested Methods refer to analytical procedure numbers used in EPA Report SW-846 "Test Methods for Evaluating Solid Waste", third edition, November 1986. Analytical details can be found in SW-846 and in documentation on file at the agency. CAUTION: The methods listed are representative SW-846 procedures and may not always be the most suitable method(s) for monitoring an analyte under the regulations.

6 Practical Quantitation Limits (PQLs) are the lowest concentrations of analytes in ground waters that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions. The PQLs listed are generally stated to one significant figure. CAUTION: The PQL values in many cases are based only on a general estimate for the method and not on a determination for individual compounds: PQLs are not a part of the regulation.

7 Polychlorinated biphenyls (CAS RN 1336-36-3); this category contains congener chemicals, including constituents of Aroclor-1016 (CAS RN 12674-11-2), Aroclor-1221 (CAS RN 11104-28-2), Aroclor-1232 (CAS RN 11141-16-5), Aroclor 1242 (CAS RN 53469-21-9), Aroclor-1248 (CAS RN 12672-29-6), Aroclor-1254 (CAS RN 11097-69-1), and Aroclor-1260 (CAS RN 11096-82-5). The PQL shown is an average value for PCB congeners.

8 This category contains congener chemicals, including tetrachlorodibenzo-p-dioxins (see also 2,3,7,8-TCDD), pentachlorodibenzo-p-dioxins, and hexachlorodibenzo-p-dioxins. The PQL shown is an average value for PCDD congeners.

9 This category contains congener chemicals, including tetrachlorodibenzofurans, pentachlorodibenzofurans, and hexachlorodibenzofurans. The PQL shown is an average value for PCDF congeners.

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. November 19, 1980;
Amended Eff. November 1, 1989; June 1, 1989;
December 1, 1988; February 1, 1988; December 1, 1987;
August 1, 1987; May 1, 1987; February 1, 1987; October 1, 1986; July 1, 1986;
May 1, 1986; January 1, 1986; October 1, 1985; July 1, 1985; April 1, 1985.
Transferred and Recodified from 10 NCAC 10F .0032 Eff. April 4, 1990;
Amended Eff. July 1, 1995; October 1, 1993; April 1, 1993; October 1, 1992;
February 1, 1992; August 1, 1991; May 1, 1991; February 1, 1991; October 1, 1990;
August 1, 1990.

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.0110 INTERIM STATUS STANDARDS FOR OWNERS AND OPERATORS OF HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES - PART 265

(a) 40 CFR 265.1 through 265.4 (Subpart A), "General", are incorporated by reference including subsequent amendments and editions.

SUBPART A - GENERAL

265.1 Purpose, scope, and applicability.

(a) The purpose of this part is to establish minimum national standards that define the acceptable management of hazardous waste during the period of interim status and until certification of final closure or, if the facility is subject to post-closure requirements, until post-closure responsibilities are fulfilled.

(b) Except as provided in Section 265.1080(b), the standards of this part, and of 40 CFR 264.552 and 40 CFR 264.553, apply to owners and operators of facilities that treat, store or dispose of hazardous waste who have fully complied with the requirements for interim status under Section 3005(e) of RCRA and section 270.10 of this chapter until either a permit is issued under Section 3005 of RCRA or until applicable Part 265 closure and post-closure responsibilities are fulfilled, and to those owners and operators of facilities in existence on November 19, 1980 who have failed to provide timely notification as required by Section 3010(a) of RCRA and/or failed to file Part A of the permit application as required by 40 CFR 270.10 (e) and (g). These standards apply to all treatment, storage and disposal of hazardous waste at these facilities after the effective date of these regulations, except as specifically provided otherwise in this part or Part 261 of this chapter.

[Comment: As stated in Section 3005(a) of RCRA, after the effective date of regulations under that section (i.e. Parts 270 and 124 of this chapter), the treatment, storage and disposal of hazardous waste is prohibited except in accordance with a permit. Section 3005(e) of RCRA provides for the continued operation of an existing facility that meets certain conditions, until final administrative disposition of the owner's and operator's permit application is made.]

(c) The requirements of this part do not apply to:

(1) A person disposing of hazardous waste by means of ocean disposal subject to a permit issued under the Marine Protection, Research, and Sanctuaries Act;

[Comment: These Part 265 regulations do apply to the treatment or storage of hazardous waste before it is loaded onto an ocean vessel for incineration or disposal at sea, as provided in paragraph (b) of this section.]

(2) [Reserved]

(3) The owner or operator of a POTW which treats, stores, or disposes of hazardous wastes;

[Comment: The owner or operator of a facility under paragraphs (c)(1) through (3) of this section is subject to the requirements of Part 264 of this chapter to the extent they are included in a permit by rule granted to such a person under Part 122 of this chapter, or are required by Section 144.14 of this chapter.]

(4) A person who treats, stores, or disposes of hazardous waste in a State with an RCRA hazardous waste program authorized under Subparts A or B of Part 271 of this chapter, except that the requirements of this part will continue to apply:

(i) As stated in paragraph (c)(2) of this section, if the authorized State RCRA program does not cover disposal of hazardous waste by means of underground injection; or

(ii) To a person who treats, stores, or disposes of hazardous waste in a State authorized under Subpart A or B of Part 271 of this chapter if the State has not been authorized to carry out the requirements and prohibitions applicable to the treatment, storage, or disposal of hazardous waste at his facility which are imposed pursuant to the Hazardous and Solid Waste Act Amendments of 1984. The requirements and prohibitions that are applicable until a State receives authorization to carry them out include all Federal program requirements identified in Section 271.1(j).

(5) The owner or operator of a facility permitted, licensed, or registered by a State to manage municipal or industrial solid waste, if the only hazardous waste the facility treats, stores, or disposes of is excluded from regulation under this part by Section 261.5 of this chapter;

(6) The owner and operator of a facility managing recyclable materials described in 261.6(a)(2), (3), and (4) of this chapter (except to the extent they are referred to in part 279 or subparts C, D, F, or G of part 266 of this chapter).

(7) A generator accumulating waste on-site in compliance with Section 262.34 of this chapter, except to the extent the requirements are included in Section 262.34 of this chapter;

(8) A farmer disposing of waste pesticides from his own use in compliance with Section 262.70 of this chapter; or

(9) The owner or operator of a totally enclosed treatment facility, as defined in Section 260.10.

(10) The owner or operator of an elementary neutralization unit or a wastewater treatment unit as defined in Section 260.10 of this chapter, provided that if the owner or operator is diluting hazardous ignitable (D001) wastes (other than the D001 High TOC Subcategory defined in Section 268.40 of this chapter, Table Treatment Standards for Hazardous Wastes), or reactive (D003) waste, to remove the characteristic before land disposal, the owner/operator must comply with the requirements set out in Section 265.17(b).

(11) (i) Except as provided in paragraph (c)(11)(ii) of this section, a person engaged in treatment or containment activities during immediate response to any of the following situations:

(A) A discharge of a hazardous waste;

(B) An imminent and substantial threat of a discharge of a hazardous waste;

(C) A discharge of a material which, when discharged, becomes a hazardous waste.

(D) An immediate threat to human health, public safety, property, or the environment, from the known or suspected presence of military munitions, other explosive material, or an explosive device, as determined by an explosive or munitions emergency response specialist as defined in 40 CFR 260.10.

(ii) An owner or operator of a facility otherwise regulated by this part must comply with all applicable requirements of Subparts C and D.

(iii) Any person who is covered by paragraph (c)(11)(i) of this section and who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of this part and Parts 122-124 of this chapter for those activities.

(iv) In the case of an explosives or munitions emergency response, if a Federal, State, Tribal or local official acting within the scope of his or her official responsibilities, or an explosives or munitions emergency response specialist, determines that immediate removal of the material or waste is necessary to protect human health or the environment, that official or specialist may authorize the removal of the material or waste by transporters who do not have EPA identification numbers and without the preparation of a manifest. In the case of emergencies involving military munitions, the responding military emergency response specialist's organizational unit must retain records for three years identifying the dates of the response, the responsible persons responding, the type and description of material addressed, and its disposition.

(12) A transporter storing manifested shipments of hazardous waste in containers meeting the requirements of 40 CFR 262.30 at a transfer facility for a period of ten days or less.

(13) The addition of absorbent material to waste in a container (as defined in Section 260.10 of this chapter) or the addition of waste to the absorbent material in a container provided that these actions occur at the time waste is first placed in the containers; and Sections 265.17(b), 265.171, and 265.172 are complied with.

(14) Universal waste handlers and universal waste transporters (as defined in 40 CFR 260.10) handling the wastes listed below. These handlers are subject to regulation under 40 CFR part 273, when handling the below listed universal wastes.

(i) Batteries as described in 40 CFR 273.2;

(ii) Pesticides as described in 40 CFR 273.3; and

(iii) Thermostats as described in 40 CFR 273.4.

(d) The following hazardous wastes must not be managed at facilities subject to regulation under this part.

(1) EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, or F027 unless:

(i) The wastewater treatment sludge is generated in a surface impoundment as part of the plant's wastewater treatment system;

(ii) The waste is stored in tanks or containers;

(iii) The waste is stored or treated in waste piles that meet the requirements of Section 264.250(c) as well as all other applicable requirements of Subpart L of this Part;

(iv) The waste is burned in incinerators that are certified pursuant to the standards and procedures in Section 265.352; or

(v) The waste is burned in facilities that thermally treat the waste in a device other than an incinerator and that are certified pursuant to the standards and procedures in Section 265.383.

(e) The requirements of this part apply to owners or operators of all facilities which treat, store or dispose of hazardous waste referred to in Part 268, and the 40 CFR part 268 standards are considered material conditions or requirements of the part 265 interim status standards.

(f) Section 266.205 of this chapter identifies when the requirements of this part apply to the storage of military munitions classified as solid waste under §266.202 of this chapter. The treatment and disposal of hazardous waste military munitions are subject to the applicable permitting, procedural, and technical standards in 40 CFR parts 260 through 270.

265.2-265.3 [Reserved]

265.4 Imminent hazard action.

Notwithstanding any other provisions of these regulations, enforcement actions may be brought pursuant to Section 7003 of RCRA.

(b) 40 CFR 265.10 through 265.19 (Subpart B), "General Facility Standards", are incorporated by reference including subsequent amendments and editions.

SUBPART B - GENERAL FACILITY STANDARDS

265.10 Applicability.

The regulations in this subpart apply to owners and operators of all hazardous waste facilities, except as Section 265.1 provides otherwise.

265.11 Identification number.

Every facility owner or operator must apply to EPA for an EPA identification number in accordance with the EPA notification procedures (45 FR 12746).

265.12 Required notices.

(a) (1) The owner or 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 the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required.

(a) (2) The owner or operator of a recovery facility that has arranged to receive hazardous waste subject to 40 CFR part 262, subpart H must provide a copy of the tracking document bearing all required signatures to the notifier, to the Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting and Data Division (2222A), Environmental Protection Agency, 401 M St., SW., Washington, DC 20469 and to the competent authorities of all other concerned countries within three working days of receipt of the shipment. The original of the signed tracking document must be maintained at the facility for at least three years.

(b) Before transferring ownership or operation of a facility during its operating life, or of a disposal facility during the post-closure care period, the owner or operator must notify the new owner or operator in writing of the requirements of this part and Part 270 of this chapter. (Also see Section 270.72 of this chapter.)

[Comment: An owner's or operator's failure to notify the new owner or operator of the requirements of this Part in no way relieves the new owner or operator of his obligation to comply with all applicable requirements.]

265.13 General waste analysis.

(a) (1) Before an owner or operator treats, stores, or disposes of any hazardous wastes, or non-hazardous wastes if applicable under Section 265.113(d), he must obtain a detailed chemical and physical analysis of a representative sample of the wastes. At a minimum, the analysis must contain all the information which must be known to treat, store, or dispose of the waste in accordance with this part and Part 268 of this chapter.

(2) The analysis may include data developed under Part 261 of this chapter, and existing published or documented data on the hazardous waste or on waste generated from similar processes.

[Comment: For example, the facility's record of analyses performed on the waste before the effective date of these regulations, or studies conducted on hazardous waste generated from processes similar to that which generated the waste to be managed at the facility, may be included in the data base required to comply with paragraph (a)(1) of this section. The owner or operator of an off-site facility may arrange for the generator of the hazardous waste to supply part or all of the information required by paragraph (a)(1) of this section, except as otherwise specified in 40 CFR 268.7 (b) and (c). If the generator does not supply the information, and the owner or operator chooses to accept a hazardous waste, the owner or operator is responsible for obtaining the information required to comply with this section.]

(3) The analysis must be repeated as necessary to ensure that it is accurate and up to date. At a minimum, the analysis must be repeated:
  (i) When the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous wastes or non-hazardous wastes, if applicable, under Section 265.113(d) has changed; and
  (ii) For off-site facilities, when the results of the inspection required in paragraph (a)(4) of this section indicate that the hazardous waste received at the facility does not match the waste designated on the accompanying manifest or shipping paper.

(4) The owner or operator of an off-site facility must inspect and, if necessary, analyze each hazardous waste movement received at the facility to determine whether it matches the identity of the waste specified on the accompanying manifest or shipping paper.

(b) The owner or operator must develop and follow a written waste analysis plan which describes the procedures which he will carry out to comply with paragraph (a) of this section. He must keep this plan at the facility. At a minimum, the plan must specify:

(1) The parameters for which each hazardous waste, or non-hazardous waste if applicable under Section 265.113(d), will be analyzed and the rationale for the selection of these parameters (i.e., how analysis for these parameters will provide sufficient information on the waste's properties to comply with paragraph (a) of this section);

(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. A representative sample may be obtained using either:
  (i) One of the sampling methods described in Appendix I of Part 261 of this chapter; or
  (ii) An equivalent sampling method.

[Comment: See Section 260.20(c) of this chapter for related discussion.]

(4) The frequency with which the initial analysis of the waste will be reviewed or repeated to ensure that the analysis is accurate and up to date;

(5) For off-site facilities, the waste analyses that hazardous waste generators have agreed to supply; and

(6) Where applicable, the methods that will be used to meet the additional waste analysis requirements for specific waste management methods as specified in Sections 265.200, 265.225, 265.252, 265.273, 265.314, 265.341, 265.375, 265.402, 265.1034(d), 265.1063(d), 265.1084 and 268.7 of this chapter.

(7) For surface impoundments exempted from land disposal restrictions under Section 268.4(a) of this chapter, the procedures and schedule for:
  (i) The sampling of impoundment contents;
  (ii) The analysis of test data; and
  (iii) The annual removal of residues which are not delisted under Section 260.22 of this chapter or which exhibit a characteristic of hazardous waste and either:
    (A) Do not meet applicable treatment standards of Part 268, Subpart D; or
    (B) Where no treatment standards have been established;
      (1) Such residues are prohibited from land disposal under Section 268.32 or RCRA section 3004(d); or
      (2) Such residues are prohibited from land disposal under Section 268.33(f).

(8) For owners and operators seeking an exemption to the air emission standards of Subpart CC of this part in accordance with Section 265.1083.
  (i) If direct measurement is used for the waste determination, the procedures and schedules for waste sampling and analysis, and the results of the analysis of test data to verify the exemption.
  (ii) If knowledge of the waste is used for the waste determination, and information prepared by the facility owner or operator or by the generator of the hazardous waste, if the waste is received from off-site, that is used as the basis for knowledge of the waste.

(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, if necessary, analyze each movement of hazardous waste received at the facility to ensure that it matches the identity of the waste designated on the accompanying manifest or shipping paper. At a minimum, the plan must describe:

(1) The procedures which will be used to determine the identity of each movement of waste managed at the facility; and

(2) The sampling method which will be used to obtain a representative sample of the waste to be identified, if the identification method includes sampling.

(3) The procedures that the owner or operator of an off-site landfill receiving containerized hazardous waste will use to determine whether a hazardous waste generator or treater has added a biodegradable sorbent to the waste in the container.

(d) Within three working days of the receipt of a shipment subject to 40 CFR part 262, subpart H, the owner or operator of facility must provide a copy of the tracking document bearing all required signatures to the notifier, to the Office of Enforcement and Compliance Assurance, Office of Compliance, Enforcement Planning, Targeting and Data Division (2222A), Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, and to competent authorities of all other concerned countries. The original copy of the tracking document must be maintained at the facility for at least three years from the date of signature.

265.14 Security.

(a) The owner or operator must prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of his facility, unless:
  (1) Physical contact with the waste, structures, or equipment with the active portion of the facility will not injure unknowing or unauthorized persons or livestock which may enter the active portion of a facility; and
  (2) Disturbance of the waste or equipment, by the unknowing or unauthorized entry of persons or livestock onto the active portion of a facility, will not cause a violation of the requirements of this part.

(b) Unless exempt under paragraphs (a)(1) and (a)(2) of this Section, a facility must have:
  (1) A 24-hour surveillance system (e.g., television monitoring or surveillance by guards of facility personnel) which continuously monitors and controls entry onto the active portion of the facility; or
  (2) (i) An artificial or natural barrier (e.g., a fence in good repair or a fence combined with a cliff), which completely surrounds the active portion of the facility; and
  (ii) A means to control entry, at all times, through the gates or other entrances to the active portion of the facility (e.g., an attendant, television monitors, locked entrance, or controlled roadway access to the facility).

[Comment: The requirements of paragraph (b) of this section are satisfied if the facility or plant within which the active portion is located itself has a surveillance system, or a barrier and a means to control entry, which complies with the requirements of paragraphs (b)(1) or (b)(2) of this section.]

(c) Unless exempt under paragraphs (a)(1) and (a)(2) of this section, 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 this active portion. The legend must be written in English and in any other language predominant in the area surrounding the facility (e.g., facilities in counties bordering the Canadian province of Quebec must post signs in French; facilities in counties bordering Mexico must post signs in Spanish), and must be legible from a distance of at least 25 feet. Existing signs with a legend other than "Danger--Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion, and that entry onto the active portion can be dangerous.

[Comment: See Section 265.117(b) for discussion of security requirements at disposal facilities during the post-closure care period.]

265.15 General inspection requirements.

(a) The owner or operator must inspect his facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to (1) release of hazardous waste constituents to the environment or (2) a threat to human health. The owner or operator must conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

(b) (1) The owner or operator must develop and follow a written schedule for inspecting all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment (such as dikes and sump pumps) that are important to preventing, detecting, or responding to environmental or human health hazards.
  (2) He must keep this schedule at the facility.
  (3) The schedule must identify the types of problems (e.g., malfunctions or deterioration) which are to be looked for during the inspection (e.g., inoperative sump pump, leaking fitting, eroding dike, etc.).
  (4) The frequency of inspection may vary for the items on the schedule. However, it should be based on the rate of deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use. At a minimum, the inspection schedule must include the items and frequencies called for in Sections 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, 265.1058, 265.1089, and 265.1091(b) where applicable.

(c) The owner or operator must remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action must be taken immediately.

(d) The owner or operator must record inspections in an inspection log or summary. He must keep these records for at least three years from the date of inspection. At a minimum, 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 or other remedial actions.

265.16 Personnel training.

(a) (1) Facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of this part. The owner or operator must ensure that this program includes all the elements described in the document required under paragraph (d)(3) of this section.

(2) This program must be directed by a person trained in hazardous waste management procedures, and must include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation) relevant to the positions in which they are employed.

(3) At a minimum, the training program must be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including where applicable:

(i) Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment;

(ii) Key parameters for automatic waste feed cut-off systems;

(iii) Communications or alarm systems;

(iv) Response to fires or explosions;

(v) Response to groundwater contamination incidents; and

(vi) Shutdown of operations.

(b) Facility personnel must successfully complete the program required in paragraph (a) of this section within six months after the effective date of these regulations or six months after the date of their employment or assignment to a facility, or to a new position at a facility, whichever is later. Employees hired after the effective date of these regulations must not work in unsupervised positions until they have completed the training requirements of paragraph (a) of this section.

(c) Facility personnel must take part in an annual review of the initial training required in paragraph (a) of this section.

(d) The owner or operator must maintain the following documents and records at the facility:

(1) The job title for each position at the facility related to hazardous waste management, and the name of the employee filling each job;

(2) A written job description for each position listed under paragraph (d)(1) of this section. This description may be consistent in its degree of specificity with descriptions for other similar positions in the same company location or bargaining unit, but must include the requisite skill, education, or other qualifications, and duties of facility personnel assigned to each position;

(3) A written description of the type and amount of both introductory and continuing training that will be given to each person filling a position listed under paragraph (d)(1) of this section;

(4) Records that document that the training or job experience required under paragraphs (a), (b), and (c) of this section has been given to, and completed by, facility personnel.

(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. Personnel training records may accompany personnel transferred within the same company.

265.17 General requirements for ignitable, reactive, or incompatible wastes.

(a) The owner or operator must take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. This waste 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 (static, electrical, or mechanical), spontaneous ignition (e.g., from heat-producing chemical reactions), and radiant heat. While ignitable or reactive waste is being handled, the owner or 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 waste.

(b) Where specifically required by other sections of this part, the treatment, storage, or disposal of ignitable or reactive waste, and the mixture of commingling of incompatible wastes, or incompatible wastes and materials, must be conducted so that it does not:
  (1) Generate extreme heat or pressure, fire or explosion, or violent reaction;
  (2) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;
  (3) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;
  (4) Damage the structural integrity of the device or facility containing the waste; or
  (5) Through other like means threaten human health or the environment.

265.18 Location Standards.

The placement of any hazardous waste in a salt dome, salt bed formation, underground mine or cave is prohibited, except for the Department of Energy Waste Isolation Pilot Project in New Mexico.

265.19 Construction quality assurance program.

(a) CQA program.
  (1) A construction quality assurance (CQA) program is required for all surface impoundment, waste pile, and landfill units that are required to comply with Sections 265.221(a), 265.254, and 265.301(a). The program must ensure that the constructed unit meets or exceeds all design criteria and specifications in the permit. The program must be developed and implemented under the direction of a CQA officer who is a registered professional engineer.
  (2) The CQA program must address the following physical components, where applicable:
    (i) Foundations;
    (ii) Dikes;
    (iii) Low-permeability soil liners;
    (iv) Geomembranes (flexible membrane liners);
    (v) Leachate collection and removal systems and leak detection systems; and
    (vi) Final cover systems.

(b) Written CQA plan. Before construction begins on a unit subject to the CQA program under paragraph (a) of this section, the owner or operator must develop a written CQA plan. The plan must identify steps that will be used to monitor and document the quality of materials and the condition and manner of their installation. The CQA plan must include:
  (1) Identification of applicable units, and a description of how they will be constructed.
  (2) Identification of key personnel in the development and implementation of the CQA plan, and CQA officer qualifications.
  (3) A description of inspection and sampling activities for all unit components identified in paragraph (a)(2) of this section, including observations and tests that will be used before, during, and after construction to ensure that the construction materials and the installed unit components meet the design specifications. The description must cover: Sampling size and locations; frequency of testing; data evaluation procedures; acceptance and rejection criteria for construction materials; plans for implementing corrective measures; and data or other information to be recorded and retained in the operating record under Section 265.73.

(c) Contents of program.
  (1) The CQA program must include observations, inspections, tests, and measurements sufficient to ensure:
    (i) Structural stability and integrity of all components of the unit identified in paragraph (a)(2) of this section;
    (ii) Proper construction of all components of the liners, leachate collection and removal system, leak detection system, and final cover system, according to permit specifications and good engineering practices, and proper installation of all components (e.g., pipes) according to design specifications;
    (iii) Conformity of all materials used with design and other material specifications under Sections 264.221, 264.251, and 264.301 of this chapter.
  (2) The CQA program shall include test fills for compacted soil liners, using the same compaction methods as in the full-scale unit, to ensure that the liners are constructed to meet the hydraulic conductivity requirements of Sections 264.221(c)(1), 264.251(c)(1), and 264.301(c)(1) of this chapter in the field. Compliance with the hydraulic conductivity requirements must be verified by using in-situ testing on the constructed test fill. The test fill requirement is waived where data are sufficient to show that a

constructed soil liner meets the hydraulic conductivity requirements of Section 264.221(c)(1), 264.254(c)(1), and 264.301(c)(1) of this chapter in the field.

(d) Certification. The Owner or operator of units subject to Section 265.19 must submit to the Regional Administrator by certified mail or hand delivery, at least 30 days prior to receiving waste, a certification signed by the CQA officer that the CQA plan has been successfully carried out and that the unit meets the requirements of Sections 265.221(a), 265.254, or 265.301(a). The owner or operator may receive waste in the unit after 30 days from the Regional Administrator's receipt of the CQA certification unless the Regional Administrator determines in writing that the construction is not acceptable, or extends the review period for a maximum of 30 more days, or seeks additional information from the owner or operator during this period. Documentation supporting the CQA officer's certification must be furnished to the Regional Administrator upon request.

(c) 40 CFR 265.30 through 265.37 (Subpart C), "Preparedness and Prevention", are incorporated by reference including subsequent amendments and editions.

SUBPART C - PREPAREDNESS AND PREVENTION

265.30 Applicability.

The regulations in this subpart apply to owners and operators of all hazardous waste facilities, except as Section 265.1 provides otherwise.

265.31 Maintenance and operation of facility.

Facilities must be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment.

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 capable of providing immediate emergency instruction (voice or signal) to facility personnel;
(b) A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams;
(c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and
(d) water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

265.33 Testing and maintenance of equipment.

All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.

265.34 Access to communications or alarm system.

(a) Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, *unless* such a device is not required under Section 265.32.
(b) If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, *unless* such a device is not required under Section 265.32.

265.35 Required aisle space.

The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.

265.36 [Reserved]

265.37 Arrangements with local authorities.

(a) The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations:
   (1) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of hazardous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes;
   (2) Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;
   (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 the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(b) Where State or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.

(b) The plan fails in an emergency;
(c) The facility changes -- in its design, construction, operation, maintenance, or other circumstances -- in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;
(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 either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

[Comment: The emergency coordinator's responsibilities are more fully spelled out in Section 265.56. Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of waste(s) handled by the facility, and type and complexity of the facility.]

265.56 Emergency procedures.

(a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately:
  (1) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and
  (2) Notify appropriate State or local agencies with designated response roles if their help is needed.
(b) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and a real extent of any released materials. He may do this by observation or review of facility records or manifests and, if necessary, by chemical analysis.
(c) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-offs from water or chemical agents used to control fire and heat-induced explosions).
(d) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he must report his findings as follows:
  (1) If his assessment indicates that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated; and
  (2) He must immediately notify either the government official designated as the on-scene coordinator for that geographical area (in the applicable regional contingency plan under Part 1510 of this Title), or the National Response Center (using their 24-hour toll free number 800/424-8802). The report must include:
    (i) Name and telephone number of reporter;
    (ii) Name and address of facility;
    (iii) Time and type of incident (e.g., release, fire);
    (iv) Name and quantity of material(s) involved, to the extent known;
    (v) The extent of injuries, if any; and
    (vi) The possible hazards to human health, or the environment, outside the facility.
(e) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.
(f) If the facility stops operations in response to a fire, explosion or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.
(g) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

(d) 40 CFR 265.50 through 265.56 (Subpart D), "Contingency Plan and Emergency Procedures", are incorporated by reference including subsequent amendments and editions.

SUBPART D - CONTINGENCY PLAN AND EMERGENCY PROCEDURES

265.50 Applicability.

The regulations in this subpart apply to owners and operators of all hazardous waste facilities, except as Section 265.1 provides otherwise.

265.51 Purpose and implementation of contingency plan.

(a) Each owner or operator must have a contingency plan for his facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.
(b) The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents 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 to comply with Sections 265.51 and 265.56 in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.
(b) If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with Part 112 of this chapter, or Part 1510 of Chapter V, or some other emergency or contingency plan, he need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this part.
(c) The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services, pursuant to Section 265.37.
(d) The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see Section 265.55), and this list must be kept up to date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.
(e) The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.
(f) The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires).

265.53 Copies of contingency plan.

A copy of the contingency plan and all revisions to the plan must be:
(a) Maintained at the facility; and
(b) Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.

265.54 Amendment of contingency plan.

The contingency plan must be reviewed, and immediately amended, if necessary, whenever:

(a) Applicable regulations are revised;

[Comment: Unless the owner or operator can demonstrate, in accordance with Section 261.3(c) or (d) of this chapter, that the recovered material is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of Parts 262, 263, and 265 of this chapter.]

(h) The emergency coordinator must ensure that, in the affected area(s) of the facility:
  (1) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and
  (2) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

(i) The owner or operator must notify the Regional Administrator, and appropriate State and local authorities, that the facility is in compliance with paragraph (h) of this section before operations are resumed in the affected area(s) of the facility.

(j) The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he must submit a written report on the incident to the Regional Administrator. The report must include:
  (1) Name, address, and telephone number of the owner or operator;
  (2) Name, address, and telephone number of the facility;
  (3) Date, time, and type of incident (e.g., fire, explosion);
  (4) Name and quantity of material(s) involved;
  (5) The extent of injuries, if any;
  (6) An assessment of actual or potential hazards to human health or the environment, where this is applicable; and
  (7) Estimated quantity and disposition of recovered material that resulted from the incident.

(e) 40 CFR 265.70 through 265.77 (Subpart E), "Manifest System, Recordkeeping, and Reporting", are incorporated by reference including subsequent amendments and editions.

SUBPART E - MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING

265.70 Applicability.

The regulations in this subpart apply to owners and operators of both on-site and off-site facilities, except as Section 265.1 provides otherwise. Sections 265.71, 265.72, and 265.76 do not apply to owners and operators of on-site facilities that do not receive any hazardous waste from off-site sources, and to owners and operators of off-site facilities with respect to waste military munitions exempted from manifest requirements under §266.203(a) of this chapter.

265.71 Use of manifest system.

(a) If a facility receives hazardous waste accompanied by a manifest, the owner or operator, or his agent, must:
   (1) Sign and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received;
   (2) Note any significant discrepancies in the manifest (as defined in Section 265.72(a)) on each copy of the manifest;

[Comment: The Agency does not intend that the owner or operator of a facility whose procedures under Section 265.13(c) include waste analysis must perform that analysis before signing the manifest and giving it to the transporter. Section 265.72(b), however, requires reporting an unreconciled discrepancy discovered during later analysis.]

   (3) Immediately give the transporter at least one copy of the signed manifest;
   (4) Within 30 days after the delivery, send a copy of the manifest to the generator; and
   (5) Retain at the facility a copy of each manifest for at least three years from the date of delivery.

(b) If a facility receives, from a rail or water (bulk shipment) transporter, hazardous waste which is accompanied by a shipping paper containing all the information required on the manifest (excluding the EPA identification numbers, generator's certification, and signatures), the owner or operator, or his agent, must:
   (1) Sign and date each copy of the manifest or shipping paper (if the manifest has not been received) to certify that the hazardous waste covered by the manifest or shipping paper was received;
   (2) Note any significant discrepancies (as defined in Section 265.72(a)) in the manifest or shipping paper (if the manifest has not been received) on each copy of the manifest or shipping paper.

[Comment: The Agency does not intend that the owner or operator of a facility whose procedures under Section 265.13(c) include waste analysis must perform that analysis before signing the shipping paper and giving it to the transporter. Section 265.72(b), however, requires reporting an unreconciled discrepancy discovered during later analysis.]

   (3) Immediately give the rail or water (bulk shipment) transporter at least one copy of the manifest or shipping paper (if the manifest has not been received);
   (4) Within 30 days after the delivery, send a copy of the signed and dated manifest to the generator; however, if the manifest has not been received within 30 days after delivery, the owner or operator, or his agent, must send a copy of the shipping paper signed and dated to the generator; and

[Comment: Section 262.23(c) of this chapter requires the generator to send three copies of the manifest to the facility when hazardous waste is sent by rail or water (bulk shipment).]

   (5) Retain at the facility a copy of the manifest and shipping paper (if signed in lieu of the manifest at the time of delivery) for at least three years from the date of delivery.

(c) Whenever a shipment of hazardous waste is initiated from a facility, the owner or operator of that facility must comply with the requirements of Part 262 of this chapter.

[Comment: The provisions of Section 262.34 are applicable to the on-site accumulation of hazardous wastes by generators. Therefore, the provisions of Section 262.34 only apply to owners or operators who are shipping hazardous waste which they generated at that facility.]

(d) Within three working days of the receipt of a shipment subject to 40 CFR part 262, subpart H, the owner or operator of facility must provide a copy of the tracking document bearing all required signatures to the notifier, to the Office of Enforcement and Compliance Assurance. Office of Compliance enforcement Planning, Targeting and Data Division (2222A), Environmental Protection Agency, 401 M St., SW., Washington, DC 20460, and to competent authorities of all other concerned countries. The original copy of the tracking document must be maintained at the facility for at least three years from the date of signature.

265.72 Manifest discrepancies.

(a) Manifest discrepancies are differences between the quantity or type of hazardous waste designated on the manifest or shipping paper, and the quantity or type of hazardous waste a facility actually receives. Significant discrepancies in quantity are: (1) for bulk waste, variations greater than 10 percent in weight, and (2) for batch waste, any variation in piece count, such as a discrepancy of one drum in a truckload. Significant discrepancies in type are obvious differences which can be discovered by inspection or waste analysis, such as waste solvent substituted for waste acid, or toxic constituents not reported on the manifest or shipping paper.

(b) Upon discovering a significant discrepancy, the owner or operator must attempt to reconcile the discrepancy with the waste generator or transporter (e.g., with telephone conversations). If the discrepancy is not resolved within 15 days after receiving the waste, the owner or operator must immediately submit to the Regional Administrator a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

265.73 Operating record.

(a) The owner or operator must keep a written operating record at his 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 the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage, or disposal at the facility as required by Appendix I;

(2) The location of each hazardous waste within the facility and the quantity at each location. For disposal facilities, the location and quantity of each hazardous waste must be recorded on a map or diagram of each cell or disposal area. For all facilities, this information must include cross-references to specific manifest document numbers, if the waste was accompanied by a manifest;

[Comment: See Sections 265.119, 265.279, and 265.309 for related requirements.]

(3) Records and results of waste analysis, waste determinations, and trial tests performed as specified in Sections 265.13, 265.200, 265.225, 265.252, 265.273, 265.314, 265.341, 265.375, 265.402, 265.1034, 265.1063, 265.1084, 268.4(a), and 268.7 of this chapter.

(4) Summary reports and details of all incidents that require implementing the contingency plan as specified in Section 265.56(j);

(5) Records and results of inspections as required by Section 265.15(d) (except these data need be kept only three years);

(6) Monitoring, testing, or analytical data when required by Sections 265.19, 265.90, 265.94, 265.191, 265.193, 265.195, 265.222, 265.223, 265.226, 265.255, 265.259, 265.260, 265.276, 265.278, 265.280(d)(1), 265.302 through 265.304, 265.347, 265.377, 265.1034(c) through 265.1034(f), 265.1035, 265.1063(d) through 265.1063(i), and 265.1064, 265.1089, 265.1090, and 265.1091.

[Comment: As required by Section 265.94, monitoring data at disposal facilities must be kept throughout the post-closure period.]

(7) All closure cost estimates under Section 265.142 and, for disposal facilities, all post-closure cost estimates under Section 265.144.

(8) Records of the quantities (and date of placement) for each shipment of hazardous waste placed in land disposal units under an extension to the effective date of any land disposal restriction granted pursuant to Section 268.5, monitoring data required pursuant to a petition under Section 268.6, or a certification under Section 268.8, and the applicable notice required by a generator under Section 268.7(a).

(9) For an off-site treatment facility, a copy of the notice, and the certification and demonstration if applicable, required by the generator or the owner or operator under Section 268.7 or Section 268.8;

(10) For an on-site treatment facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator under Section 268.7 or Section 268.8;

(11) For an off-site land disposal facility, a copy of the notice, and the certification and demonstration if applicable, required by the generator or the owner or operator of a treatment facility under Section 268.7 or Section 268.8;

(12) For an on-site land disposal facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator of a treatment facility under Section 268.7, or Section 268.8.
(13) For an off-site storage facility, a copy of the notice, and the certification and demonstration if applicable, required by the generator or the owner or operator under Section 268.7 or Section 268.8; and
(14) For an on-site storage facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator of a treatment facility under Section 268.7 or Section 268.8.

265.74 Availability, retention, and disposition of records.

(a) All records, including plans, required under this part must be furnished upon request, and made available at all reasonable times for inspection by any officer, employee, or representative of EPA who is duly designated by the Administrator.
(b) The retention period for all records required under this part is extended automatically during the course of any unresolved enforcement action regarding the facility or as requested by the Administrator.
(c) A copy of records of waste disposal locations and quantities under Section 265.73(b)(2) must be submitted to the Regional Administrator and local land authority upon closure of the facility (see Section 265.119).

265.75 Biennial report.

The owner or operator must prepare and submit a single copy of a biennial report to the Regional Administrator by March 1 of each even numbered year. The biennial report must be submitted on EPA Form 8700-13B. The report must cover facility activities during the previous calendar year and must include the following information:
(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 from which the facility received a hazardous waste during the year; for imported shipments, the report must give the name and address of the foreign generator;
(d) A description and the quantity of each hazardous waste the facility received during the year. For off-site facilities, this information must be listed by EPA identification number of each generator;
(e) The method of treatment, storage, or disposal for each hazardous waste;
(f) Monitoring data under Section 265.94(a)(2)(ii) and (iii), and (b)(2), where required;
(g) The most recent closure cost estimate under Section 265.142, and, for disposal facilities, the most recent post-closure cost estimate under Section 265.144; and
(h) For generators who treat, store, or dispose of hazardous waste on-site, a description of the efforts undertaken during the year to reduce the volume and toxicity of waste generated.
(i) For generators who treat, store, or dispose of hazardous waste on-site, a description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years to the extent such information is available for the years prior to 1984.
(j) The certification signed by the owner or operator of the facility or his authorized representative.

265.76 Unmanifested waste report.

If a facility accepts for treatment, storage, or disposal any hazardous waste from an off-site source without an accompanying manifest, or without an accompanying shipping paper as described in Section 263.20 (e)(2) of this chapter, and if the waste is not excluded from the manifest requirement by Section 261.5 of this chapter, then the owner or operator must prepare and submit a single copy of a report to the Regional Administrator within fifteen days after receiving the waste. The unmanifested waste report must be submitted on EPA form 8700-13B. Such report must be designated 'Unmanifested Waste Report' and include the following information:
(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 the facility received;
(e) The method of treatment, storage, or disposal for each hazardous waste;
(f) The certification signed by the owner or operator of the facility or his authorized representative; and
(g) A brief explanation of why the waste was unmanifested, if known.

[Comment: Small quantities of hazardous waste are excluded from regulation under this part and do not require a manifest. Where a facility receives unmanifested hazardous wastes, the Agency suggests that the owner or operator obtain from each generator a certification that the waste qualifies for exclusion. Otherwise, the Agency suggests that the owner or operator file an unmanifested waste report for the hazardous waste movement.]

265.77 Additional reports.

In addition to submitting the biennial report and unmanifested waste reports described in Sections 265.75 and 265.76, the owner or operator must also report to the Regional Administrator:

(a) Releases, fires, and explosions as specified in Section 265.56(j);
(b) Ground-water contamination and monitoring data as specified in Sections 265.93 and 265.94; and
(c) Facility closure as specified in Section 265.115.
(d) As otherwise required by Subparts AA, BB, and CC of this part.

(f) 40 CFR 265.90 through 265.94 (Subpart F), "Ground-Water Monitoring", are incorporated by reference including subsequent amendments and editions.

SUBPART F - GROUNDWATER MONITORING

265.90 Applicability.

(a) Within one year after the effective date of these regulations, the owner or operator of a surface impoundment, landfill, or land treatment facility which is used to manage hazardous waste must implement a groundwater monitoring program capable of determining the facility's impact on the quality of ground water in the uppermost aquifer underlying the facility, except as Section 265.1 and paragraph (c) of this section provide otherwise.

(b) Except as paragraphs (c) and (d) of this section provide otherwise, the owner or operator must install, operate, and maintain a groundwater monitoring system which meets the requirements of Section 265.91, and must comply with Sections 265.92-265.94. This ground-water monitoring program must be carried out during the active life of the facility, and for disposal facilities, during the post-closure care period as well.

(c) All or part of the groundwater monitoring requirements of this subpart may be waived if the owner or operator can demonstrate that there is a low potential for migration of hazardous waste or hazardous waste constituents from the facility via the uppermost aquifer to water supply wells (domestic, industrial, or agricultural) or to surface water. This demonstration must be in writing, and must be kept at the facility. This demonstration must be certified by a qualified geologist or geotechnical engineer and must establish the following:
   (1) The potential for migration of hazardous waste or hazardous waste constituents from the facility to the uppermost aquifer, by an evaluation of:
      (i) A water balance of precipitation, evapotranspiration, runoff, and infiltration; and
      (ii) Unsaturated zone characteristics (i.e., geologic materials, physical properties, and depth to ground water); and
   (2) The potential for hazardous waste or hazardous waste constituents which enter the uppermost aquifer to migrate to a water supply well or surface water, by an evaluation of:
      (i) Saturated zone characteristics (i.e., geologic materials, physical properties, and rate of ground-water flow); and
      (ii) The proximity of the facility to water supply wells or surface water.

(d) If an owner or operator assumes (or knows) that groundwater monitoring of indicator parameters in accordance with Sections 265.91 and 265.92 would show statistically significant increases (or decreases in the case of pH) when evaluated under Section 265.93(b), he may install, operate, and maintain an alternate groundwater monitoring system (other than the one described in Sections 265.91 and 265.92). If the owner or operator decides to use an alternate groundwater monitoring system he must:
   (1) Within one year after the effective date of these regulations, submit to the Regional Administrator a specific plan, certified by a qualified geologist or geotechnical engineer, which satisfies the requirements of Section 265.93(d)(3), for an alternate ground-water monitoring system;
   (2) Not later than one year after the effective date of these regulations, initiate the determinations specified in Section 265.93(d)(4);
   (3) Prepare and submit a written report in accordance with Section 265.93(d)(5);
   (4) Continue to make the determinations specified in Section 265.93(d)(4) on a quarterly basis until final closure of the facility; and
   (5) Comply with the recordkeeping and reporting requirements in Section 265.94(b).

(e) The groundwater monitoring requirements of this subpart may be waived with respect to any surface impoundment that (1) is used to neutralize wastes which are hazardous solely because they exhibit the corrosivity characteristic under Section 261.22 of this chapter or are listed as hazardous wastes in Subpart D of Part 261 of this chapter only for this reason, and (2) contains no other hazardous wastes, if the owner or operator can demonstrate that there is no potential for migration of hazardous wastes from the impoundment. The demonstration must establish, based upon consideration of the characteristics of the wastes and the impoundment that the corrosive wastes will be neutralized to the extent that they no longer meet the corrosivity characteristic before they can migrate out of the impoundment. The demonstration must be in writing and must be certified by a qualified professional.

265.91 Ground-water monitoring system.

(a) A groundwater monitoring system must be capable of yielding groundwater samples for analysis and must consist of:
  (1) Monitoring wells (at least one) installed hydraulically upgradient (i.e., in the direction of increasing static head) from the limit of the waste management area. Their number, locations, and depths must be sufficient to yield ground-water samples that are:
    (i) Representative of background ground-water quality in the uppermost aquifer near the facility; and
    (ii) Not affected by the facility; and
  (2) Monitoring wells (at least three) installed hydraulically downgradient (i.e., in the direction of decreasing static head) at the limit of the waste management area. Their number, locations, and depths must ensure that they immediately detect any statistically significant amounts of hazardous waste or hazardous waste constituents that migrate from the waste management area to the uppermost aquifer.
  (3) The facility owner or operator may demonstrate that an alternate hydraulically downgradient monitoring well location will meet the criteria outlined below. The demonstration must be in writing and kept at the facility. The demonstration must be certified by a qualified ground-water scientist and establish that:
    (i) An existing physical obstacle prevents monitoring well installation at the hydraulically downgradient limit of the waste management area; and
    (ii) The selected alternate downgradient location is as close to the limit of the waste management area as practical; and
    (iii) The location ensures detection that given the alternate location, is as early as possible of any statistically significant amounts of hazardous waste or hazardous waste constituents that migrate from the waste management area to the uppermost aquifer.
    (iv) Lateral expansion, new, or replacement units are not eligible for an alternate downgradient location under this paragraph.

(b) Separate monitoring systems for each waste management component of a facility are not required provided that provisions for sampling upgradient and downgradient water quality will detect any discharge from the waste management area.
  (1) In the case of a facility consisting of only one surface impoundment, landfill, or land treatment area, the waste management area is described by the waste boundary (perimeter).
  (2) In the case of a facility consisting of more than one surface impoundment, landfill, or land treatment area, the waste management area is described by an imaginary boundary line which circumscribes the several waste management components.

(c) All monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated, and packed with gravel or sand where necessary, to enable sample collection at depths where appropriate aquifer flow zones exist. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed with a suitable material (e.g., cement grout or bentonite slurry) to prevent contamination of samples and the ground water.

265.92 Sampling and analysis.

(a) The owner or operator must obtain and analyze samples from the installed ground-water monitoring system. The owner or operator must develop and follow a ground-water sampling and analysis plan. He must keep this plan at the facility. 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.

[Comment: See "Procedures Manual For Ground-Water Monitoring At Solid Waste Disposal Facilities," EPA-530 SW-611, August 1977 and "Methods for Chemical Analysis of Water and Wastes," EPA-600/4-79-020, March 1979, for discussions of sampling and analysis procedures.]

(b) The owner or operator must determine the concentration or value of the following parameters in groundwater samples in accordance with paragraphs (c) and (d) of this section:
  (1) Parameters characterizing the suitability of the ground water as a drinking water supply, as specified in Appendix III.
  (2) Parameters establishing ground-water quality:
    (i) Chloride
    (ii) Iron

(iii) Manganese
(iv) Phenols
(v) Sodium
(vi) Sulfate

[Comment: These parameters are to be used as a basis for comparison in the event a groundwater quality assessment is required under Section 265.93(d).]

(3) Parameters used as indicators of ground-water contamination:
(i) pH
(ii) Specific Conductance
(iii) Total Organic Carbon
(iv) Total Organic Halogen

(c) (1) For all monitoring wells, the owner or operator must establish initial background concentrations or values of all parameters specified in paragraph (b) of this section. He must do this quarterly for one year.
(2) For each of the indicator parameters specified in paragraph (b)(3) of this section, at least four replicate measurements must be obtained for each sample and the initial background arithmetic mean and variance must be determined by pooling the replicate measurements for the respective parameter concentrations or values in samples obtained from upgradient wells during the first year.

(d) After the first year, all monitoring wells must be sampled and the samples analyzed with the following frequencies:
(1) Samples collected to establish groundwater quality must be obtained and analyzed for the parameters specified in paragraph (b)(2) of this section at least annually.
(2) Samples collected to indicate groundwater contamination must be obtained and analyzed for the parameters specified in paragraph (b)(3) of this section at least semiannually.

(e) Elevation of the groundwater surface at each monitoring well must be determined each time a sample is obtained.

265.93 Preparation, evaluation, and response.

(a) Within one year after the effective date of these regulations, the owner or operator must prepare an **outline** of a groundwater quality assessment program. The outline must describe a more comprehensive goundwater monitoring program (than that described in Sections 265.91 and 265.92) capable of determining:
(1) Whether hazardous waste or hazardous waste constituents have entered the ground water;
(2) The rate and extent of migration of hazardous waste or hazardous waste constituents in the ground water; and
(3) The concentrations of hazardous waste or hazardous waste constituents in the ground water.

(b) For each indicator parameter specified in Section 265.92(b)(3), the owner or operator must calculate the arithmetic mean and variance, based on at least four replicate measurements on each sample, for each well monitored in accordance with Section 265.92(d)(2), and compare these results with its initial background arithmetic mean. The comparison must consider individually each of the wells in the monitoring system, and must use the Student's t-test at the 0.01 level of significance (see Appendix IV) to determine statistically significant increases (and decreases, in the case of pH) over initial background.

(c) (1) If the comparisons for the *upgradient* wells made under paragraph (b) of this section show a significant increase (or pH decrease), the owner or operator must submit this information in accordance with Section 265.94(a)(2)(ii).
(2) If the comparisons for *downgradient* wells made under paragraph (b) of this section show a significant increase (or pH decrease), the owner or operator must then immediately obtain additional groundwater samples from those downgradient wells where a significant difference was detected, split the samples in two, and obtain analyses of all additional samples to determine whether the significant difference was a result of laboratory error.

(d) (1) If the analyses performed under paragraph (c)(2) of this section confirm the significant increase (or pH decrease), the owner or operator must provide written notice to the Regional Administrator -- within seven days of the date of such confirmation -- that the facility may be affecting groundwater quality.
(2) Within 15 days after the notification under paragraph (d)(1) of this section, the owner or operator must develop and submit to the Regional Administrator a specific plan, based on the outline required under paragraph (a) of this section and certified by a qualified geologist or geotechnical engineer, for a groundwater quality assessment program at the facility.
(3) The plan to be submitted under Section 265.90(d)(1) or paragraph (d)(2) of this section must specify:
(i) The number, location, and depth of wells;

(ii) Sampling and analytical methods for those hazardous wastes or hazardous waste constituents in the facility;

(iii) Evaluation procedures, including any use of previously-gathered ground-water quality information; and

(iv) A schedule of implementation.

(4) The owner or operator must implement the groundwater quality assessment plan which satisfies the requirements of paragraph (d)(3) of this section, and, at a minimum determine:

(i) The rate and extent of migration of the hazardous waste or hazardous waste constituents in the ground water; and

(ii) The concentrations of the hazardous waste or hazardous waste constituents in the ground water.

(5) The owner or operator must make his first determination under paragraph (d)(4) of this section as soon as technically feasible, and, within 15 days after that determination, submit to the Regional Administrator a written report containing an assessment of the ground-water quality.

(6) If the owner or operator determines, based on the results of the first determination under paragraph (d)(4) of this section, that no hazardous waste or hazardous waste constituents from the facility have entered the ground water, then he may reinstate the indicator evaluation program described in Section 265.92 and paragraph (b) of this section. If the owner or operator reinstates the indicator evaluation program, he must so notify the Regional Administrator in the report submitted under paragraph (d)(5) of this section.

(7) If the owner or operator determines, based on the first determination under paragraph (d)(4) of this Section, that hazardous waste or hazardous waste constituents from the facility have entered the ground water, then he:

(i) Must continue to make the determinations required under paragraph (d)(4) of this section on a quarterly basis until final closure of the facility, if the groundwater quality assessment plan was implemented prior to final closure of the facility; or

(ii) May cease to make the determinations required under paragraph (d)(4) of this section, if the groundwater quality assessment plan was implemented during the post-closure care period.

(e) Notwithstanding any other provision of this subpart, any groundwater quality assessment to satisfy the requirements of Section 265.93(d)(4) which is initiated prior to final closure of the facility must be completed and reported in accordance with Section 265.93(d)(5).

(f) Unless the ground water is monitored to satisfy the requirements of Section 265.93(d)(4) at least annually, the owner or operator must evaluate the data on ground-water surface elevations obtained under Section 265.92(e) to determine whether the requirements under Section 265.91(a) for locating the monitoring wells continues to be satisfied. If the evaluation shows that Section 265.91(a) is no longer satisfied, the owner or operator must immediately modify the number, location, or depth of the monitoring wells to bring the groundwater monitoring system into compliance with this requirement.

265.94 Recordkeeping and reporting.

(a) Unless the ground water is monitored to satisfy the requirements of Section 265.93(d)(4), the owner or operator must:

(1) Keep records of the analyses required in Section 265.92 (c) and (d), the associated groundwater surface elevations required in Section 265.92(e), and the evaluations required in Section 265.93(b) throughout the active life of the facility, and, for disposal facilities, throughout the post-closure care period as well; and

(2) Report the following groundwater monitoring information to the Regional Administrator:

(i) During the first year when initial background concentrations are being established for the facility: concentrations or values of the parameters listed in Section 265.92(b)(1) for each groundwater monitoring well within 15 days after completing each quarterly analysis. The owner or operator must separately identify for each monitoring well any parameters whose concentration or value has been found to exceed the maximum contaminant levels listed in Appendix III.

(ii) Annually: Concentrations or values of the parameters listed in Section 265.92(b)(3) for each groundwater monitoring well, along with the required evaluations for these parameters under Section 265.93(b). The owner or operator must separately identify any significant differences from initial background found in the upgradient wells, in accordance with Section 265.93(c)(1). During the active life of the facility, this information must be submitted no later than March 1 following each calendar year.

(iii) No later than March 1 following each calendar year. Results of the evaluations of ground-water surface elevations of ground-water surface elevations under Section 265.93(f), and a description of the response to that evaluation, where applicable.

(b) If the ground water is monitored to satisfy the requirements of Section 265.93(d)(4), the owner or operator must:

(1) Keep records of the analyses and evaluations specified in the plan, which satisfies the requirements of 265.93(d)(3), throughout the active life of the facility and, for disposal facilities, throughout the post-closure care period as well; and

(2) Annually, until final closure of the facility, submit to the Regional Administrator a report containing the results of his or her ground-water quality assessment program which includes, but is not limited to, the calculated (or measured) rate of migration of hazardous waste or hazardous waste constituents in the ground water during the reporting period. This information must be submitted no later than March 1, following each calendar year.

(g) 40 CFR 265.110 through 265.120 (Subpart G), "Closure and Post-Closure", are incorporated by reference including subsequent amendments and editions.

SUBPART G - CLOSURE AND POST-CLOSURE

265.110 Applicability.

Except as Section 265.1 provides otherwise:
(a) Sections 265.111-265.115 (which concern closure) apply to the owners and operators of all hazardous waste management facilities; and
(b) Sections 265.116-265.120 (which concern post-closure care) apply to the owners and operators of:
  (1) All hazardous waste disposal facilities;
  (2) Waste piles and surface impoundments for which the owner or operator intends to remove the wastes at closure to the extent that these sections are made applicable to such facilities in Section 265.228 or Section 265.258;
  (3) Tank systems that are required under 265.197 to meet requirements for landfills; and
  (4) Containment building that are required under Section 265.1102 to meet the requirement for landfills.

265.111 Closure performance standard.

The owner or operator must close the facility in a manner that:
(a) Minimizes the need for further maintenance; and
(b) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground or surface waters or to the atmosphere; and
(c) Complies with the closure requirements of this subpart including, but not limited to, the requirements of Sections 265.197, 267.228, 265.258, 265.280, 265.310, 265.351, 265.381, 265.404, and 264.1102.

265.112 Closure plan; amendment of plan.

(a) Written plan. By May 19, 1981, or by six months after the effective date of the rule that first subjects a facility to provisions of this section, the owner or operator of a hazardous waste management facility must have a written closure plan. Until final closure is completed and certified in accordance with Section 265.115, a copy of the most current plan must be furnished to the Regional Administrator upon request, including request by mail. In addition, for facilities without approved plans, it must also be provided during site inspections, on the day of inspection, to any officer, employee, or representative of the Agency who is duly designated by the Administrator.
(b) Content of plan. The plan must identify steps necessary to perform partial and/or final closure of the facility at any point during its active life. The closure plan must include, at least:
  (1) A description of how each hazardous waste management unit at the facility will be closed in accordance with Section 265.111; and
  (2) A description of how final closure of the facility will be conducted in accordance with Section 265.111. The description must identify the maximum extent of the operation which will be unclosed during the active life of the facility; and
  (3) An estimate of the maximum inventory of hazardous wastes ever on-site over the active life of the facility and a detailed description of the methods to be used during partial and final closure, including, but not limited to methods for removing, transporting, treating, storing or disposing of all hazardous waste, identification of and the type(s) of off-site hazardous waste management unit(s) to be used, if applicable; and
  (4) A detailed description of the steps needed to remove or decontaminate all hazardous waste residues and contaminated containment system components, equipment, structures, and soils during partial and final closure including, but not limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination necessary to satisfy the closure performance standard; and
  (5) A detailed description of other activities necessary during the partial and final closure period to ensure that all partial closures and final closure satisfy the closure performance standards, including, but not limited to, ground-water monitoring, leachate collection, and run-on and run-off control; and

(6) A schedule for closure of each hazardous waste management unit and for final closure of the facility. The schedule must include, at a minimum, the total time required to close each hazardous waste management unit and the time required for intervening closure activities which will allow tracking of the progress of partial and final closure. (For example, in the case of a landfill unit, estimates of the time required to treat or dispose of all hazardous waste inventory and of the time required to place a final cover must be included.); and

(7) An estimate of the expected year of final closure for facilities that use trust funds to demonstrate financial assurance under Sections 265.143 or 265.145 and whose remaining operating life is less than twenty years, and for facilities without approved closure plans.

(c) Amendment of plan. The owner or operator may amend the closure plan at any time prior to the notification of partial or final closure of the facility. An owner or operator with an approved closure plan must submit a written request to the Regional Administrator to authorize a change to the approved closure plan. The written request must include a copy of the amended closure plan for approval by the Regional Administrator.

(1) The owner or operator must amend the closure plan whenever:

(i) Changes in operating plans or facility design affect the closure plan, or

(ii) There is a change in the expected year of closure, if applicable, or

(iii) In conducting partial or final closure activities, unexpected events require a modification of the closure plan.

(2) The owner or operator must amend the closure plan at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected the closure plan. If an unexpected event occurs during the partial or final closure period, the owner or operator must amend the closure plan no later than 30 days after the unexpected event. These provisions also apply to owners or operators of surface impoundments and waste piles who intended to remove all hazardous wastes at closure, but are required to close as landfills in accordance with Section 285.310.

(3) An owner or operator with an approved closure plan must submit the modified plan to the Regional Administrator at least 60 days prior to the proposed change in facility design or operation, or no more than 60 days after an unexpected event has occurred which has affected the closure plan. If an unexpected event has occurred during the partial or final closure period, the owner or operator must submit the modified plan no more than 30 days after the unexpected event. These provisions also apply to owners or operators of surface impoundments and waste piles who intended to remove all hazardous wastes at closure but are required to close as landfills in accordance with Section 265.310. If the amendment to the plan is a Class 2 or 3 modification according to the criteria in Section 270.42, the modification to the plan will be approved according to the procedures in Section 265.112(d)(4).

(4) The Regional Administrator may request modifications to the plan under the conditions described in paragraph (c)(1) of this section. An owner or operator with an approved closure plan must submit the modified plan within 60 days of the request from the Regional Administrator, or within 30 days if the unexpected event occurs during partial or final closure. If the amendment is considered a Class 2 or 3 modification according to the criteria in Section 270.42, the modification to the plan will be approved in accordance with the procedures in Section 265.112(d)(4).

(d) Notification of partial closure and final closure.

(1) The owner or 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, whichever is earlier. The owner or operator must submit the closure plan to the Regional Administrator at least 45 days prior to the date on which he expects to begin partial or final closure of a boiler or industrial furnace. The owner or operator must submit the 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 with only tanks, container storage, or incinerator units. Owners or operators with approved closure plans must notify the Regional Administrator in writing at least 60 days prior to the date on which he expects to begin closure of a surface impoundment, waste pile, landfill, or land treatment unit, or final closure of a facility involving such a unit. Owners or operators with approved closure plans must notify the Regional Administrator in writing at least 45 days prior to the date on which he expects to begin partial or final closure of a boiler or industrial furnace. Owners or operators with approved closure plans must notify the Regional Administrator in writing at least 45 days prior to the date on which he expects to begin final closure of a facility with only tanks, container storage, or incinerator units.

(2) The date when he "expects to begin closure" must be either:

(i) Within 30 days after the date on which any hazardous waste management unit receives the known final volume of hazardous wastes, or, if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous wastes, no later than one year after the date on which the unit received the most recent volume of hazardous waste. If the owner or operator of a hazardous waste management unit can demonstrate to the Regional Administrator that the

hazardous waste management unit or facility has the capacity to receive additional hazardous wastes and he has taken, and will continue to take, all steps to prevent threats to human health and the environment, including compliance with all interim status requirements, the Regional Administrator may approve an extension to this one-year limit; or

(ii) For units meeting the requirements of Section 265.113(d), no later than 30 days after the date on which the hazardous waste management unit receives the known final volume of nonhazardous wastes, or if there is a reasonable possibility that the hazardous waste management unit will receive additional nonhazardous wastes, no later than one year after the date on which the unit received the most recent volume of nonhazardous wastes. If the owner or operator can demonstrate to the Regional Administrator that the hazardous waste management unit has the capacity to receive additional nonhazardous wastes and he has taken, and will continue to take, all steps to prevent threats to human health and the environment, including compliance with all applicable interim status requirements, the Regional Administrator may approve an extension to this one-year limit.

(3) The owner or operator must submit his closure plan to the Regional Administrator no later than 15 days after:

(i) Termination of interim status except when a permit is issued simultaneously with termination of interim status; or

(ii) Issuance of a judicial decree or final order under Section 3008 of RCRA to cease receiving hazardous wastes or close.

(4) The Regional Administrator will provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments on the plan and request modifications to the plan no later than 30 days from the date of the notice. He will also, in response to a request or at his own discretion, hold a public hearing whenever such a hearing might clarify one or more issues concerning a closure plan. The Regional Administrator will give public notice of the hearing at least 30 days before it occurs. (Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined.) The Regional Administrator will approve, modify, or disapprove the plan within 90 days of its receipt. If the Regional Administrator does not approve the plan he shall provide the owner or operator with a detailed written statement of reasons for the refusal and the owner or operator must modify the plan or submit a new plan for approval within 30 days after receiving such written statement. The Regional Administrator will approve or modify this plan in writing within 60 days. If the Regional Administrator modifies the plan, this modified plan becomes the approved closure plan. The Regional Administrator must assure that the approved plan is consistent with Sections 265.111 through 265.115 and the applicable requirements of Subpart F of this part, Sections 265.197, 265.228, 265.258, 265.280, 265.310, 265.351, 265.381, 265.404, and 265.1102. A copy of the modified plan with a detailed statement of reasons for the modifications must be mailed to the owner or operator.

(e) Removal of wastes and decontamination or dismantling of equipment. Nothing in the action shall preclude the owner or operator from removing hazardous wastes and decontaminating or dismantling equipment in accordance with the approved partial or final closure plan at any time before or after notification of partial or final closure.

265.113 Closure; time allowed for closure.

(a) Within 90 days after receiving the final volume of hazardous wastes, or the final volume of nonhazardous wastes if the owner or operator complies with all applicable requirements in paragraphs (d) and (e) of this section, at a hazardous waste management unit or facility, or within 90 days after approval of the closure plan, whichever is later, the owner or operator must treat, remove from the unit or facility, or dispose of on-site, all hazardous wastes in accordance with the approved closure plan. The Regional Administrator may approve a longer period if the owner or operator demonstrates that:

(1) (i) The activities required to comply with this paragraph will, of necessity, take longer than 90 days to complete; or

(ii) (A) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes, or has the capacity to receive non-hazardous wastes if the facility owner or operator complies with paragraphs (d) and (e) of this section: and

(B) There is a reasonable likelihood that he or another person will recommence operation of the hazardous waste management unit or the facility within one year; and

(C) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

(2) He has taken and will continue to take all steps to prevent threats to human health and the environment, including compliance with all applicable interim status requirements.

(b) The owner or operator must complete partial and final closure activities in accordance with the approved closure plan and within 180 days after receiving the final volume of hazardous wastes, or the final volume of nonhazardous wastes if the owner or operator complies with all applicable requirements in paragraphs (d) and (e) of this section, at the hazardous waste management unit or facility, or 180 days after approval of the closure plan, if that is later. The Regional Administrator may approve an extension to the closure period if the owner or operator demonstrates that:

(1) (i) The partial or final closure activities will, of necessity, take longer than 180 days to complete; or

(ii) (A) The hazardous waste management unit or facility has the capacity to receive additional hazardous wastes, or has the capacity to receive non-hazardous wastes if the facility owner or operator complies with paragraphs (d) and (e) of this section; and

(B) There is reasonable likelihood that he or another person will recommence operation of the hazardous waste management unit or the facility within one year; and

(C) Closure of the hazardous waste management unit or facility would be incompatible with continued operation of the site; and

(2) He has taken and will continue to take all steps to prevent threats to human health and the environment from the unclosed but not operating hazardous waste management unit or facility, including compliance with all applicable interim status requirements.

(c) The demonstrations referred to in paragraphs (a)(1) and (b)(1) of this section must be made as follows:

(1) The demonstrations in paragraph (a)(1) of this section must be made at least 30 days prior to the expiration of the 90-day period in paragraph (a) of this section; and

(2) The demonstrations in paragraph (b)(1) of this section must be made at least 30 days prior to the expiration of the 180-day period in paragraph (b) of this section, unless the owner or operator is otherwise subject to the deadlines in paragraph (d) of this section.

(d) The Regional Administrator may allow an owner or operator to receive non-hazardous wastes in a landfill, land treatment, or surface impoundment unit after the final receipt of hazardous wastes at that unit if:

(1) The owner or operator submits an amended part B application, or a part B application, if not previously required, and demonstrates that:

(i) The unit has the existing design capacity as indicated on the part A application to receive non-hazardous wastes; and

(ii) There is a reasonable likelihood that the owner or operator or another person will receive non-hazardous wastes in the unit within one year after the final receipt of hazardous wastes; and

(iii) The non-hazardous wastes will not be incompatible with any remaining wastes in the unit or with the facility design and operating requirements of the unit or facility under this part; and

(iv) Closure of the hazardous waste management unit would be incompatible with continued operation of the unit or facility; and

(v) The owner or operator is operating and will continue to operate in compliance with all applicable interim status requirements; and

(2) The part B application includes an amended waste analysis plan, ground-water monitoring and response program, human exposure assessment required under RCRA section 3019, and closure and post-closure plans, and updated cost estimates and demonstrations of financial assurance for closure and post-closure care as necessary and appropriate to reflect any changes due to the presence of hazardous constituents in the non-hazardous wastes, and changes in closure activities, including the expected year of closure if applicable under Section 265.112(b)(7), as a result of the receipt of non-hazardous wastes following the final receipt of hazardous wastes; and

(3) The part B application is amended, as necessary and appropriate, to account for the receipt of non-hazardous wastes following receipt of the final volume of hazardous wastes; and

(4) The part B application and the demonstrations referred to in paragraphs (d)(1) and (d)(2) of this section are submitted to the Regional Administrator no later than 180 days prior to the date on which the owner or operator of the facility receives the known final volume of hazardous wastes, or no later than 90 days after the effective date of this rule in the state in which the unit is located, whichever is later.

(e) In addition to the requirements in paragraph (d) of this section, an owner or operator of a hazardous waste surface impoundment that is not in compliance with the liner and leachate collection system requirements in 42 U.S.C. 3004(o)(1) and 3005(j)(1) or 42 U.S.C. 3004(o)(2) or (3) or 3005(j) (2), (3), (4) or (13) must:

(1) Submit with the part B application:

(i) A contingent corrective measures plan; and

(ii) A plan for removing hazardous wastes in compliance with paragraph (e)(2) of this section; and

(2) Remove all hazardous wastes from the unit by removing all hazardous liquids and removing all hazardous sludges to the extent practicable without impairing the integrity of the liner(s), if any.

(3) Removal of hazardous wastes must be completed no later than 90 days after the final receipt of hazardous wastes. The Regional Administrator may approve an extension to this deadline if the owner or operator

demonstrates that the removal of hazardous wastes will, of necessity, take longer than the allotted period to complete and that an extension will not pose a threat to human health and the environment.

(4) If a release that is a statistically significant increase (or decrease in the case of pH) in hazardous constituents over background levels is detected in accordance with the requirements in subpart F of this part, the owner or operator of the unit:
   (i) Must implement corrective measures in accordance with the approved contingent corrective measures plan required by paragraph (e)(1) of this section no later than one year after detection of the release, or approval of the contingent corrective measures plan, whichever is later;
   (ii) May receive wastes at the unit following detection of the release only if the approved corrective measures plan includes a demonstration that continued receipt of wastes will not impede corrective action; and
   (iii) May be required by the Regional Administrator to implement corrective measures in less than one year or to cease receipt of wastes until corrective measures have been implemented if necessary to protect human health and the environment.

(5) During the period of corrective action, the owner or operator shall provide semi-annual reports to the Regional Administrator that describe the progress of the corrective action program, compile all ground-water monitoring data, and evaluate the effect of the continued receipt of non-hazardous wastes on the effectiveness of the corrective action.

(6) The Regional Administrator may require the owner or operator to commence closure of the unit if the owner or operator fails to implement corrective action measures in accordance with the approved contingent corrective measures plan within one year as required in paragraph (e)(4) of this section, or fails to make substantial progress in implementing corrective action and achieving the facility's background levels.

(7) If the owner or operator fails to implement corrective measures as required in paragraph (e)(4) of this section, or if the Regional Administrator determines that substantial progress has not been made pursuant to paragraph (e)(6) of this section he shall:
   (i) Notify the owner or operator in writing that the owner or operator must begin closure in accordance with the deadline in paragraphs (a) and (b) of this section and provide a detailed statement of reasons for this determination, and
   (ii) Provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments on the decision no later than 20 days after the date of the notice.
   (iii) If the Regional Administrator receives no written comments, the decision will become final five days after the close of the comment period. The Regional Administrator will notify the owner or operator that the decision is final, and that a revised closure plan, if necessary, must be submitted within 15 days of the final notice and that closure must begin in accordance with the deadlines in paragraphs (a) and (b) of this section.
   (iv) If the Regional Administrator receives written comments on the decision, he shall make a final decision within 30 days after the end of the comment period, and provide the owner or operator in writing and the public through a newspaper notice, a detailed statement of reasons for the final decision. If the Regional Administrator determines that substantial progress has not been made, closure must be initiated in accordance with the deadlines in paragraphs (a) and (b) of this section.
   (v) The final determinations made by the Regional Administrator under paragraphs (e)(7)(iii) and (iv) of this section are not subject to administrative appeal.

265.114 Disposal or decontamination of equipment structures and soils.

During the partial and final closure periods, all contaminated equipment, structures and soil must be properly disposed of, or decontaminated unless specified otherwise in Sections 265.197, 265.228, 265.258, 265.280, or 265.310. By removing all hazardous wastes or hazardous constituents during partial and final closure, the owner or operator may become a generator of hazardous waste and must handle that hazardous waste in accordance with all applicable requirements of Part 262 of this chapter.

265.115 Certification of closure.

Within 60 days of completion of closure of each hazardous waste surface impoundment, waste pile, land treatment, and landfill unit, and within 60 days of completion of final closure, the owner or operator must submit to the Regional Administrator, by registered mail, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved closure plan. The certification must be signed by the owner or operator and by an independent registered professional engineer. Documentation supporting the

independent registered professional engineer's certification must be furnished to the Regional Administrator upon request until he releases the owner or operator from the financial assurance requirements for closure under Section 265.143(h).

265.116 Survey plat.

No later than the submission of the certification of closure of each hazardous waste disposal unit, an owner or operator must submit to the local zoning authority, or the 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. This plat must be prepared and certified by a professional land surveyor. The plat filed with the local zoning authority, or the authority with jurisdiction over local land use must contain a note, prominently displayed, which states the owner's or operator's obligation to restrict disturbance of the hazardous waste disposal unit in accordance with the applicable Subpart G regulations.

265.117 Post-closure care and use of property.

(a) (1) Post-closure care for each hazardous waste management unit subject to the requirements of Sections 265.117-265.120 must begin after completion of closure of the unit and continue for 30 years after that date. It must consist of at least the following:
  (i) Monitoring and reporting in accordance with the requirements of Subparts F, K, L, M, and N of this part; and
  (ii) Maintenance and monitoring of waste containment systems in accordance with the requirements of Subparts F, K., L, M, and N of this part.
  (2) Any time preceding closure of a hazardous waste management unit subject to post-closure care requirements or final closure, or any time during the post-closure period for a particular hazardous waste disposal unit, the Regional Administrator may:
    (i) Shorten the post-closure care period applicable to the hazardous waste management unit, or facility, if all disposal units have been closed, if he finds that the reduced period is sufficient to protect human health and the environment (e.g., leachate or ground-water monitoring results, characteristics of the hazardous waste, application of advanced technology, or alternative disposal, treatment, or reuse techniques indicate that the hazardous waste management unit or facility is secure]; or
    (ii) Extend the post-closure care period applicable to the hazardous waste management unit or facility, if he finds that the extended period is necessary to protect human health and the environment (e.g., leachate or groundwater monitoring results indicate a potential for migration of hazardous wastes at levels which may be harmful to human health and the environment).

(b) The Regional Administrator may require, at partial and final closure, continuation of any of the security requirements of Section 265.14 during part or all of the post-closure period when:
  (1) Hazardous wastes may remain exposed after completion of partial or final closure; or
  (2) Access by the public or domestic livestock may pose a hazard to human health.

(c) Post-closure use of property on or in which hazardous wastes remain after partial or final closure must never be allowed to disturb the integrity of the final cover, liner(s), or any other components of the containment system, or the function of the facility's monitoring systems, unless the Regional Administrator finds that the disturbance:
  (1) Is necessary to the proposed use of the property, and will not increase the potential hazard to human health or the environment; or
  (2) Is necessary to reduce a threat to human health or the environment.

(d) All post-closure care activities must be in accordance with the provisions of the approved post-closure plan as specified in Section 265.118.

265.118 Post-closure plan; amendment of plan.

(a) Written plan. By May 19, 1981, the owner or operator of a hazardous waste disposal unit must have a written post-closure plan. An owner or operator of a surface impoundment of waste pile that intends to remove all hazardous wastes at closure must prepare a post-closure plan and submit it to the Regional Administrator within 90 days of the date that the owner or operator or Regional Administrator determines that the hazardous waste management unit or facility must be closed as a landfill, subject to the requirements of Sections 265.117-265-120.

(b) Until final closure of the facility, a copy of the most current post-closure plan must be furnished to the Regional Administrator upon request, including request by mail. In addition, for facilities without approved post-closure

plans, it must also be be provided during site inspections, on the day of inspection, to any officer, employee or representative of the Agency who is duly designated by the Administrator. After final closure has been certified, the person or office specified in Section 265.118(c)(3) must keep the approved post-closure plan during the post-closure period.

(c) For each hazardous waste management unit subject to the requirements of this Section, the post-closure plan must identify the activities that will be carried on after closure of each disposal unit and the frequency of these activities, and include at least:
  (1) A description of the planned monitoring activities and frequencies at which they will be performed to comply with Subparts F, K, L, M, and N of this Part during the post-closure care period; and
  (2) A description of the planned maintenance activities, and frequencies at which they will be performed, to ensure:
    (i) The integrity of the cap and final cover or other containment systems in accordance with the requirements of Subparts K, L, M, and N of this Part; and
    (ii) The function of the monitoring equipment in accordance with the requirements of Subparts F, K, L, M, and N of this Part; and
  (3) The name, address, and phone number of the person or office to contact about the hazardous waste disposal unit or facility during the post-closure care period.

(d) Amendment of plan. The owner or operator may amend the post-closure plan any time during the active life of the facility or during the post-closure care period. An owner or operator with an approved post-closure plan must submit a written request to the Regional Administrator to authorize a change to the approved plan. The written request must include a copy of the amended post-closure plan for approval by the Regional Administrator.
  (1) The owner or operator must amend the post-closure plan whenever:
    (i) Changes in operating plans or facility design affect the post-closure plan, or
    (ii) Events which occur during the active life of the facility, including partial and final closures, affect the post-closure plan.
  (2) The owner or operator must amend the post-closure plan at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected the post-closure plan.
  (3) An owner or operator with an approved post-closure plan must submit the modified plan to the Regional Administrator post-closure plan at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected the post-closure plan. If an owner or operator of a surface impoundment or a waste pile who intended to remove all hazardous wastes at closure in accordance with Sections 265.228(b) or 265.258(a) is required to close as a landfill in accordance with Section 265.310, the owner or operator must submit a post-closure plan within 90 days of the determination by the owner or operator or Regional Administrator that the unit must be closed as a landfill. If the amendment to the post-closure plan is a Class 2 or 3 modification according to the criteria in Sections 270.42, the modification to the plan will be approved according to the procedures in Section 265.118(f).
  (4) The Regional Administrator may request modifications to the plan under the conditions described in above paragraph (d)(1). An owner or operator with an approved post-closure plan must submit the modified plan no lather than 60 days of the request from the Regional Administrator. If the amendment to the plan is considered a Class 2 or 3 modification according to the criteria in Sections 270.42, the modifications to the post-closure plan will be approved in accordance with the procedures in Section 265.118(f). If the Regional Administrator determines that an owner or operator of a surface impoundment or waste pile who intended to remove all hazardous wastes at closure must close the facility as a landfill, the owner or operator must submit a post-closure plan for approval to the Regional Administrator within 90 days of the determination.

(e) The owner or operator of a facility with hazardous waste management units subject to these requirements must submit his post-closure plan to the Regional Administrator at least 180 days before the date he expects to begin partial or final closure of the first hazardous waste disposal unit. The date he "expects to begin closure" of the first hazardous waste disposal unit must be either within 30 days after the date on which the hazardous waste management unit receives the known final volume of hazardous waste or, if there is a reasonable possibility that the hazardous waste management unit will receive additional hazardous wastes, no later than one year after the date on which the unit received the most recent volume of hazardous wastes. The owner of operator must submit the post-closure plan to the Regional Administrator no later than 15 days after:
  (1) Termination of interim status (except when a permit is issued to the facility simultaneously with termination of interim status); or
  (2) Issuance of a judicial decree or final orders under Section 3008 of RCRA to cease receiving wastes or close.

(f) The Regional Administrator will provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments on the post-closure plan and request modifications to the plan no later

than 30 days from the date of the notice. He will also, in response to a request or at his own discretion, hold a public hearing whenever such a hearing might clarify one or more issues concerning a post-closure plan. The Regional Administrator will give public notice of the hearing at least 30 days before it occurs. (Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined.) The Regional Administrator will approve, modify, or disapprove the plan within 90 days of its receipt. If the Regional Administrator does not approve the plan he shall provide the owner or operator with a detailed written statement of reasons for the refusal and the owner or operator must modify the plan or submit a new plan for approval within 30 days after receiving such written statement. The Regional Administrator will approve or modify this plan in writing within 60 days. If the regional Administrator modifies the plan, this modified plan becomes the approved post-closure plan. The Regional Administrator must ensure that the approved post-closure plan is consistent with Sections 265.117 through 265.120. A copy of the modified plan with a detailed statement of reasons for the modifications must be mailed to the owner or operator.

(g) The post-closure plan and length of the post-closure care period may be modified any time prior to the end of the post-closure care period in either of the following two ways:

(1) The owner or operator or any member of the public may petition the Regional Administrator to extend or reduce the post-closure care period applicable to a hazardous waste management unit or facility based on cause, or alter the requirements of the post-closure care period based on cause.

(i) The petition must include evidence demonstrating that:

(A) The secure nature of the hazardous waste management unit or facility makes the post-closure care requirement(s) unnecessary or supports reduction of the post-closure care period specified in the current post-closure plan (e.g., leachate or ground-water monitoring results, characteristics of the wastes, application of advanced technology, or alternative disposal, treatment, or re-use techniques indicate that the facility is secure), or

(B) The requested extension in the post-closure care period or alteration of post-closure care requirements is necessary to prevent threats to human health and the environment (e.g., leachate or groundwater monitoring results indicate a potential for migration of hazardous wastes at levels which may be harmful to human health and the environment).

(ii) These petitions will be considered by the Regional Administrator only when they present new and relevant information not previously considered by the Regional Administrator. Whenever the Regional Administrator is considering a petition, he will provide the owner or operator and the public, through a newspaper notice, the opportunity to submit written comments within 30 days of the date of the notice. He will also, in response to a request or at his own discretion, hold a public hearing whenever a hearing might clarify one or more issues concerning the post-closure plan. The Regional Administrator will give the public notice of the hearing at least 30 days before it occurs. (Public notice of the hearing may be given at the same time as notice of the opportunity for written public comments, and the two notices may be combined.) After considering the comments, he will issue a final determination, based upon the criteria set forth in paragraph (g)(1) of this section.

(iii) If the Regional Administrator denies the petition, he will send the petitioner a brief written response giving a reason for the denial.

(2) The Regional Administrator may tentatively decide to modify the post-closure plan if he deems it necessary to prevent threats to human health and the environment. He may propose to extend or reduce the post-closure care period applicable to a hazardous waste management unit or facility based on cause, or alter the requirements of the post-closure care period based on cause.

(i) The Regional Administrator will provide the owner or operator and the affected public, through a newspaper notice, the opportunity to submit written comments within 30 days of the date of the notice and the opportunity for a public hearing as in subparagraph (g)(1)(ii) of this section. After considering the comments he will issue a final determination.

(ii) The Regional Administrator will base his final determination upon the same criteria as required for petitions under paragraph (g)(1)(i) of this section. A modification of the post-closure plan may include where appropriate, the temporary suspension rather than permanent deletion of one or more post-closure care requirements. At the end of the specified period of suspension, the Regional Administrator would then determine whether the requirement(s) should be permanently discontinued or reinstated to prevent threats to human health and the environment.

265.119 Post-closure notices.

(a) No later than 60 days after certification of closure of each hazardous waste disposal unit, the owner or operator must submit to the local zoning authority, or the 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. For hazardous wastes disposed of before January 12, 1981, the owner or operator must identify the type, location and quantity of the hazardous wastes to the best of his knowledge and in accordance with any records he has kept.

(b) Within 60 days of certification of closure of the first hazardous waste disposal unit and within 60 days of certification of closure of the last hazardous waste disposal unit, the owner or operator must:

(1) Record, in accordance with State law, a notation on the deed to the facility property-or on some other instrument which is normally examined during title search--that will in perpetuity notify any potential purchaser of the property that:

(i) The land has been used to manager hazardous wastes; and

(ii) Its use is restricted under 40 CFR Subpart G regulations; and

(iii) The survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or other hazardous waste disposal unit of the facility required by Section 265.116 and Section 265.119(a) have been filed with the local zoning authority or the authority with jurisdiction over local land use and with the Regional Administrator; and

(2) Submit a certification signed by the owner or operator that he has recorded the notation specified in paragraph (b)(1) of this section and a copy of the document in which the notation has been placed, to the Regional Administrator.

(c) If the owner or operator or any subsequent owner of the land upon which a hazardous waste disposal unit was located wishes to remove hazardous wastes and hazardous waste residues, the liner, if any, and all contaminated structures, equipment, and soils, he must request a modification to the approved post-closure plan in accordance with the requirements of Section 265.118(g). The owner or operator must demonstrate that the removal of hazardous wastes will satisfy the criteria of Section 265.117(c). By removing hazardous waste, the owner or operator may become a generator of hazardous waste and must manage it in accordance with all applicable requirements of this chapter. If the owner or operator is granted approval to conduct the removal activities, the owner or operator may request that the Regional Administrator approve either:

(1) The removal of the notation on the deed to the facility property or other instrument normally examined during title search, or

(2) The addition of a notation to the deed or instrument indicating the removal of the hazardous waste.

265.120 Certification of completion of post-closure care.

No later than 60 days after the completion of the established post-closure care period for each hazardous waste disposal unit, the owner or operator must submit to the Regional Administrator, by registered mail, 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. The certification must be signed by the owner or operator and an independent registered professional engineer. Documentation supporting the independent registered professional engineer's certification must be furnished to the Regional Administrator upon request until he releases the owner or operator from the financial assurance requirements for post-closure care under Section 265.145(h).

(h) 40 CFR 265.140 through 265.151 (Subpart H), "Financial Requirements", are incorporated by reference including subsequent amendments and editions, except that 40 CFR 265.143(a)(3), (a)(4), (a)(5), (a)(6), and 40 CFR 265.145(a)(3), (a)(4), (a)(5), are not incorporated by reference.

(1) The following shall be substituted for the provisions of 40 CFR 265.143(a)(3) which were not incorporated by reference:

> The owner or operator shall deposit the full amount of the closure cost estimate at the time the fund is established. Within 1 year of the effective date of these Rules, an owner or operator using a closure trust fund established prior to the effective date of these Rules shall deposit an amount into the fund so that its value after this deposit at least equals the amount of the current closure cost estimate, or shall obtain other financial assurance as specified in this Section.

(2) The following shall be substituted for the provisions of 40 CFR 265.143(a)(6) which were not incorporated by reference:

> After the trust fund is established, whenever the current closure cost estimate changes, the owner or operator shall compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator within 60 days after the change in the cost estimate, shall either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current closure cost estimate, or obtain other financial assurance as specified in this Section to cover the difference.

(3) The following shall be substituted for the provisions of 40 CFR 265.145(a)(3) which were not incorporated by reference:

(A) Except as otherwise provided in Paragraph (h)(3)(B) of this Section, the owner or operator shall deposit the full amount of the post-closure cost estimate at the time the fund is established.

(B) If the Department finds that the owner or operator of an inactive hazardous waste disposal unit cannot provide financial assurance for post-closure through any other option (e.g. surety bond, letter of credit, or corporate guarantee), a plan for annual payments to the trust fund during the interim status period may be established by the Department by use of an Administrative Order.

SUBPART H -- FINANCIAL REQUIREMENTS

265.140 Applicability.

(a) The requirements of Sections 265.142, 265.143 and 265.147 through 265.150 apply to owners or operators of all hazardous waste facilities, except as provided otherwise in this section or in Section 265.1.

(b) The requirements of Sections 265.144 and 265.146 apply only to owners and operators of:
  (1) Disposal facilities;
  (2) Tank systems that are required under 264.197 of this chapter to meet the requirements for landfills; and
  (3) Containment buildings that are required under Section 265.1102 to meet the requirements for landfills.

(c) States and the Federal government are exempt from the requirements of this subpart.

265.141 Definitions of terms as used in this subpart.

(a) *Closure plan* means the plan for closure prepared in accordance with the requirements of Section 265.112.

(b) *Current closure cost estimate* means the most recent of the estimates prepared in accordance with Sections 265.142 (a), (b), and (c).

(c) *Current post-closure cost estimate* means the most recent of the estimates prepared in accordance with Sections 265.144(a), (b), and (c).

(d) *Parent corporation* means a corporation which directly owns at least 50 percent of the voting stock of the corporation which is the facility owner or operator; the latter corporation is deemed a "subsidiary" of the parent corporation.

(e) *Post-closure plan* means the plan for post-closure care prepared in accordance with the requirements of Sections 265.117 through 265.120.

(f) The following terms are used in the specifications for the financial tests for closure, post-closure care, and liability coverage. The definitions are intended to assist in the understanding of these regulations and are not intended to limit the meanings of terms in a way that conflicts with generally accepted accounting practices.

Assets means all existing and all probable future economic benefits obtained or controlled by a particular entity.

Current assets means cash or other assets or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business.

Current liabilities means obligations whose liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets or the creation of other current liabilities.

Current plugging and abandonment cost estimate means the most recent of the estimates prepared in accordance with Section 144.62(a),(b), and (c) of this Title.

Independently audited refers to an audit performed by an independent certified public accountant in accordance with generally accepted auditing standards.

Liabilities means probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services to other entities in the future as a result of past transactions or events.

Net working capital means current assets minus current liabilities.

Net worth means total assets minus total liabilities and is equivalent to owner's equity.

Tangible net worth means the tangible assets that remain after deducting liabilities; such assets would not include intangibles such as goodwill and rights to patents or royalties.

(g) In the liability insurance requirements the terms "bodily injury" and "property Damage" shall have the meanings given these terms by applicable State law. However, these terms do not include those liabilities which, consistent with standard industry practice, are excluded from coverage in liability policies for bodily injury and property damage. The Agency intends the meanings of other terms used in the liability insurance requirements to be consistent with their common meanings within the insurance industry. The definitions given below of several of the terms are intended to assist in the understanding of these regulations and are not intended to limit their meanings in a way that conflicts with general insurance industry usage.

Accidental occurrence means an accident, including continuous or repeated exposure to conditions, which results in bodily injury or property damage neither expected nor intended from the standpoint of the insured.

Legal defense costs means any expenses that an insurer incurs in defending against claims of third parties brought under the terms and conditions of an insurance policy.

Nonsudden accidental occurrence means an occurrence which takes place over time and involves continuous or repeated exposure.

Sudden accidental occurrence means an occurrence which is not continuous or repeated in nature.

(h) *Substantial business relationship* means the extent of a business relationship necessary under applicable State law to make a guarantee contract issued incident to that relationship valid and enforceable. A "substantial business relationship" must arise from a pattern of recent or ongoing business transactions, in addition to the guarantee itself, such that a currently existing business relationship between the guarantor and the owner or operator is demonstrated to the satisfaction of the applicable EPA Regional Administrator.

265.142 Cost estimate for closure.

(a) The owner or operator must have a detailed written estimate, in current dollars of the cost of closing the facility in accordance with the requirements in Sections 265.111-265.115 and applicable closure requirements in Sections 265.178, 265.197, 265.228, 265.258, 265.280, 265.310, 265.351, 265.381, 265.404 and 265.1102.
  (1) The estimate must equal the cost of final closure at the point in the facility's active life when the extent and manner of its operation would make closure the most expensive, as indicated by its closure plan (see Section 265.112(b)); and
  (2) The closure cost estimate must be based on the costs to the owner or operator of hiring a third party to close the facility. A third party is a party who is neither a parent nor a subsidiary of the owner or operator. (See definition of parent corporation in Section 265.141(d)). The owner or operator may use costs for on-site disposal if he can demonstrate that on-site disposal capacity will exist at all times over the life of the facility.
  (3) The closure cost estimate may not incorporate any salvage value that may be realized with the sale of hazardous wastes, or non-hazardous wastes if applicable under Section 265.113(d), facility structures or equipment, land, or other assets associated with the facility at the time of partial or final closure.
  (4) The owner or operator may not incorporate a zero cost for hazardous waste, or non-hazardous wastes if applicable under Section 265.113(d), that might have economic value.

(b) During the active life of the facility, the owner or operator must adjust the closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with Section 265.143. For owners and operators using the financial test or corporate guarantee, the closure cost estimate must be updated for inflation within 30 days after the close of the firms fiscal year and before submission of updated information to the Regional Administrator as specified in Section 265.143(e)(3). The adjustment may be made by recalculating the closure cost estimate in current dollars, or by using an inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business, as specified in paragraphs (b)(1) and (b)(2) of this section. The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.
  (1) The first adjustment is made by multiplying the closure cost estimate by the inflation factor. The result is the adjusted closure cost estimate.
  (2) Subsequent adjustments are made by multiplying the latest adjusted closure cost estimate by the latest inflation factor.

(c) During the active life of the facility, the owner or operator must revise the closure cost estimate no later than 30 days after a revision has been made to the closure plan which increases the cost of closure. If the owner of operator has an approved closure plan, the closure cost estimate must be revised no later than 30 days after the Regional Administrator has approved the request to modify the closure plan. If the change in the closure plan increases the cost of closure. The revised closure cost estimate must be adjusted for inflation as specified in Section 265.142(b).

(d) The owner or operator must keep the following at the facility during the operating life of the facility. The latest closure cost estimate prepared in accordance with Sections 265.142(a) and (c) and, when this estimate has been adjusted in accordance with Section 265.142(b), the latest adjusted closure cost estimate.

265.143 Financial assurance for closure.

By the effective date of these regulations, an owner or operator of each facility must establish financial assurance for closure of the facility. He must choose from the options as specified in paragraph (a) through (e) of this section.

(a) *Closure trust fund.*
  (1) An owner or operator may satisfy the requirements of this section by establishing a closure trust fund which conforms to the requirements of this paragraph and submitting an originally signed duplicate of the trust agreement to the Regional Administrator. The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.
  (2) The wording of the trust agreement must be identical to the wording specified in Section 264.151(a)(1) and the trust agreement must be accompanied by a formal certification of acknowledgment (for example, see Section 264.151(a)(2)). Schedule A of the trust agreement must be updated within 60 days after a change in the amount of the current closure cost estimate covered by the agreement.
  (3) **[This federal provision was not adopted by reference; see Paragraph (h)(1) for State requirement.]**
  (4) Deleted.
  (5) Deleted.

(6) **[This federal provision was not adopted by reference; see Paragraph (h)(2) for State requirement.]**

(7) If the value of the trust fund is greater than the total amount of the current closure cost estimate, the owner or operator may submit a written request to the Regional Administrator for release of the amount in excess of the current closure cost estimate.

(8) If an owner or operator substitutes other financial assurance as specified in this section for all or part of the trust fund, he may submit a written request to the Regional Administrator for release of the amount in excess of the current closure cost estimate covered by the trust fund.

(9) Within 60 days after receiving a request from the owner or operator for release of funds as specified in paragraphs (a)(7) or (8) of this section, the Regional Administrator will instruct the trustee to release to the owner or operator such funds as the Regional Administrator specifies in writing.

(10) After beginning partial or final closure, an owner or operator or another person authorized to conduct partial or final closure may request reimbursements for partial or final closure expenditures by submitting itemized bills to the Regional Administrator. The owner or operator may request reimbursements for partial closure only if sufficient funds are remaining in the trust fund to cover the maximum costs of closing the facility over its remaining operating life. No later than 60 days after receiving bills for partial or final closure activities, the Regional Administrator will instruct the trustee to make reimbursements in those amounts as the Regional Administrator specifies in writing, if the Regional Administrator determines that the partial or final closure expenditures are in accordance with the approved closure plan, or otherwise justified. If the Regional Administrator has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the value of the trust fund, he may withhold reimbursements of such amounts as he deems prudent until he determines, in accordance with Section 265.143(h) that the owner or operator is no longer required to maintain financial assurance for final closure of the facility. If the Regional Administrator does not instruct the trustee to make such reimbursements, he will provide to the owner or operator a detailed written statement of reasons.

(11) The Regional Administrator will agree to termination of the trust when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with section 265.143(h).

(b) *Surety bond guaranteeing payment into a closure trust fund.*

(1) An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this paragraph and by submitting the bond to the Regional Administrator. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond must be identical to the wording specified in Section 264.151(b).

(3) The owner or operator who uses a surety bond to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the Regional Administrator. This standby trust fund must meet the requirements specified in Section 265.143(a), except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the Regional Administrator with the surety bond; and

(ii) Until the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in Section 265.143(a);

(B) Updating of Schedule A of the trust agreement (see Section 264.151(a)) to show current closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The bond must guarantee that the owner or operator will:

(i) Fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility; or

(ii) Fund the standby trust fund in an amount equal to the penal sum within 15 days after an administrative order to begin final closure issued by the Regional Administrator becomes final, or within 15 days after an order to begin final closure is issued by a U.S. district court or other court of competent jurisdiction; or

(iii) Provide alternate financial assurance as specified in this section, and obtain the Regional Administrator's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and the Regional Administrator of a notice of cancellation of the bond from the surety.

(5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

(6) The penal sum of the bond must be in an amount at least equal to the current cost estimate, except as provided in section 265.143(f).

(7) Whenever the current closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Regional Administrator, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure cost estimate decreases, the penal sum may be reduced to the amount of the current closure cost estimate following written approval by the Regional Administrator.

(8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Regional Administrator. Cancellation may not occur, however, during the 120 days, beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Regional Administrator, as evidenced by the return receipts.

(9) The owner or operator may cancel the bond if the Regional Administrator has given prior written consent based on his receipt of evidence of alternate financial assurance as specified in this section.

(c) *Closure letter of credit.*

(1) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit which conforms to the requirements of this paragraph and submitting the letter to the Regional Administrator. The issuing institution must be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a Federal or State agency.

(2) The wording of the letter of credit must be identical to the wording specified in Section 264.151(d).

(3) An owner or operation who uses a letter of credit to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Regional Administrator will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Regional Administrator. This standby trust fund must meet the requirements of the trust fund specified in section 265.143(a), except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the Regional Administrator with the letter of credit; and

(ii) Unless the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in Section 265.143(a);

(B) Updating of Schedule A of the trust agreement (see Section 264.151(a)) to show current closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The letter of credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: the EPA Identification Number, name, and address of the facility, and the amount of funds assured for closure of the facility by the letter of credit.

(5) The letter of credit must be irrevocable and issued for a period of at least 1 year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least 1 year unless, at least 120 days before the current expiration date, the issuing institution notifies both the owner or operator and the Regional Administrator by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days will begin on the date when both the owner or operator and the Regional Administrator have received the notice, as evidenced by the return receipts.

(6) The letter of credit must be issued in an amount at least equal to the current closure cost estimate, except as provided in section 265.143(f).

(7) Whenever the current closure cost estimate increases to an amount greater than the amount of the credit, the owner or operator, within 60 days after the increase, must either cause the amount of the credit to be increased so that it at least equals the current closure cost estimate and submit evidence of such increase to the Regional Administrator, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure cost estimate decreases, the amount of the credit may be reduced to the amount of the current closure cost estimate following written approval by the Regional Administrator.

(8) Following a final administrative determination pursuant to Section 3008 of RCRA that the owner or operator has failed to perform final closure in accordance with the approved closure plan when required to do so, the Regional Administrator may draw on the letter of credit.

(9) If the owner or operator does not establish alternate financial assurance as specified in this section and obtain written approval of such alternate assurance from the Regional Administrator within 90 days after receipt by both the owner or operator and the Regional Administrator of a notice from the issuing

institution that it has decided not to extend the letter of credit beyond the current expiration date, the Regional Administrator will draw on the letter of credit. The Regional Administrator may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last 30 days of any such extension the Regional Administrator will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this section and obtain written approval of such assurance from the Regional Administrator.

(10) The Regional Administrator will return the letter of credit to the issuing institution for termination when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 265.143(h).

(d) *Closure insurance.*

(1) An owner or operator may satisfy the requirements of this section by obtaining closure insurance which conforms to the requirements of this paragraph and submitting a certificate of such insurance to the Regional Administrator. By the effective date of these regulations the owner or operator must submit to the Regional Administrator a letter from an insurer stating that the insurer is considering issuance of closure insurance conforming to the requirements of this paragraph to the owner or operator. Within 90 days after the effective date of these regulations, the owner or operator must submit the certificate of insurance to the Regional Administrator or establish other financial assurance as specified in this section. At a minimum, the insurer must be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(2) The wording of the certificate of insurance must be identical to the wording specified in Section 264.151(e).

(3) The closure insurance policy must be issued for a face amount at least equal to the current closure cost estimate, except as provided in Section 265.143(f). The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

(4) The closure insurance policy must guarantee that funds will be available to close the facility whenever final closure occurs. The policy must also guarantee that once final closure begins, the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the Regional Administrator, to such party or parties as the Regional Administrator specifies.

(5) After beginning partial or final closure, an owner or operator or any other person authorized to conduct closure may request reimbursements for closure expenditures by submitting itemized bills to the Regional Administrator. The owner or operator may request reimbursements for partial closure only if the remaining value of the policy is sufficient to cover the maximum costs of closing the facility over its remaining operating life. Within 60 days after receiving bills for closure activities, the Regional Administrator will instruct the insurer to make reimbursements in such amounts as the Regional Administrator specifies in writing if the Regional Administrator determines that the partial of final closure expenditures are in accordance with the approved closure plan or otherwise justified. If the Regional Administrator has reason to believe that the maximum cost of closure over the remaining life of the facility will be significantly greater than the face amount of the policy, he may withhold reimbursement of such amounts as he deems prudent until he determines, in accordance with Section 265.143(h), that the owner or operator is no longer required to maintain financial assurance for final closure of the particular facility. If the Regional Administrator does not instruct the insurer to make such reimbursements, he will provide to the owner or operator a detailed written statement of reasons.

(6) The owner or operator must maintain the policy in full force and effect until the Regional Administrator consents to termination of the policy by the owner or operator as specified in paragraph (d)(10) of this section. Failure to pay the premium, without substitution of alternate financial assurance as specified in this section, will constitute a significant violation of these regulations, warranting such remedy as the Regional Administrator deems necessary. Such violation will be deemed to begin upon receipt by the Regional Administrator of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.

(7) Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.

(8) The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the Regional Administrator. Cancellation, termination, or failure to renew may not occur, however, during the 120 days beginning with the date of receipt of the notice by both the Regional Administrator and the owner or operator,

as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:

(i) The Regional Administrator deems the facility abandoned; or

(ii) Interim status is terminated or revoked; or

(iii) Closure is ordered by the Regional Administrator or a U.S. district court or other court of competent jurisdiction; or

(iv) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

(v) The premium due is paid.

(9) Whenever the current closure cost estimate increases to an amount greater than the face amount of the policy, the owner or operator, within 60 days after the increase, must either cause the face amount to be increased to an amount at least equal to the current closure cost estimate and submit evidence of such increase to the Regional Administrator, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current closure cost estimate decreases, the face amount may be reduced to the amount of the current closure cost estimate following written approval by the Regional Administrator.

(10) The Regional Administrator will give written consent to the owner or operator that he may terminate the insurance policy when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 265.143(h).

(e) *Financial test and corporate guarantee for closure.*

(1) An owner or operator may satisfy the requirements of this section by demonstrating that he passes a financial test as specified in this paragraph. To pass this test the owner or operator must meet the criteria of either paragraph (e)(1)(i) or (e)(1)(ii) of this section:

(i) The owner or operator must have:

(A) Two of the following three ratios:

- A ratio of total liabilities to net worth less than 2.0;
- A ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and
- A ratio of current assets to current liabilities greater than 1.5; and

(B) Net working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least $10 million; and

(D) Assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(ii) The owner or operator must have:

(A) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and

(B) Tangible net worth at least six times the sum of the current closure and post-closure cost estimates; and

(C) Tangible net worth of at least $10 million; and

(D) Assets located in the United States amounting to at least 90 percent of total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(2) The phrase "current closure and post-closure cost estimates" as used in paragraph (e)(1) of this section refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer [Section 264.151(f)]. The phrase "current plugging and abandonment cost estimates" as used in paragraph (e)(1) of this section refers to the cost estimates required to be shown in paragraph 1-4 of the letter from the owner's or operator's chief financial officer [Section 144.70(f) of this title].

(3) To demonstrate that he meets this test, the owner or operator must submit the following items to the Regional Administrator:

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in Section 264.151(f); and

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

(iii) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(A) He has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

(B) In connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

(4) The owner or operator may obtain an extension of the time allowed for submission of the documents specified in paragraph (e)(3) of this section if the fiscal year of the owner or operator ends during the 90 days prior to the effective date of these regulations and if the year-end financial statements for that fiscal year will be audited by an independent certified public accountant. The extension will end no later than 90 days after the end of the owner's or operator's fiscal year. To obtain the extension, the owner's or operator's chief financial officer must send, by the effective date of these regulations, a letter to the Regional Administrator of each Region in which the owner's or operator's facilities to be covered by the financial test are located. This letter from the chief financial officer must:

(i) Request the extension;

(ii) Certify that he has grounds to believe that the owner or operator meets the criteria of the financial test;

(iii) Specify for each facility to be covered by the test the EPA Identification Number, name, address, and current closure and post-closure cost estimates to be covered by the test;

(iv) Specify the date ending the owner's or operator's last complete fiscal year before the effective date of these regulations;

(v) Specify the date, no later than 90 days after the end of such fiscal year, when he will submit the documents specified in paragraph (e)(3) of this section; and

(vi) Certify that the year-end financial statements of the owner or operator for such fiscal year will be audited by an independent certified public accountant.

(5) After the initial submission of items specified in paragraph (e)(3) of this section, the owner or operator must send updated information to the Regional Administrator within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in paragraph (e)(3) of this section.

(6) If the owner or operator no longer meets the requirements of paragraph (e)(1) of this section, he must send notice to the Regional Administrator of intent to establish alternate financial assurance as specified in this section. The notice must be sent by certified mail within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator must provide the alternate financial assurance within 120 days after the end of such fiscal year.

(7) The Regional Administrator may, based on a reasonable belief that the owner or operator may no longer meet the requirements of paragraph (e)(1) of this section, require reports of financial condition at any time from the owner or operator in addition to those specified in paragraph (e)(3) of this section. If the Regional Administrator finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of paragraph (e)(1) of this section, the owner or operator must provide alternate financial assurance as specified in this section within 30 days after notification of such a finding.

(8) The Regional Administrator may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see paragraph (e)(3)(ii) of this section). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The Regional Administrator will evaluate other qualifications on an individual basis. The owner or operator must provide alternate financial assurance as specified in this section within 30 days after notification of the disallowance.

(9) The owner or operator is no longer required to submit the items specified in paragraph (e)(3) of this section when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 265.143(h).

(10) An owner or operator may meet the requirements of this section by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in paragraphs (e)(1) through (8) of this section and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in Section 264.151(h). A certified copy of the guarantee must accompany the items sent to the Regional Administrator as specified in paragraph (e)(3) of this section. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this

"substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee must provide that:

(i) If the owner or operator fails to perform final closure of a facility covered by the corporate guarantee in accordance with the closure plan and other interim status requirements whenever required to do so, the guarantor will do so or establish a trust fund as specified in Section 265.143(a) in the name of the owner or operator.

(ii) The corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the Regional Administrator. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Regional Administrator, as evidenced by the return receipts.

(iii) If the owner or operator fails to provide alternate financial assurance as specified in this section and obtain the written approval of such alternate assurance from the Regional Administrator within 90 days after receipt by both the owner or operator and the Regional Administrator of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternate financial assurance in the name of the owner or operator.

(f) *Use of multiple financial mechanisms.* An owner or operator may satisfy the requirements of this section by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds, letters of credit and insurance. The mechanisms must be as specified in paragraphs (a) through (d), respectively, of this section, except that it is the combination of mechanisms, rather than the single mechanism, which must provide financial assurance for an amount at least equal to the current closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, he may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The Regional Administrator may use any or all of the mechanisms to provide for closure of the facility.

(g) *Use of a financial mechanism for multiple facilities.* An owner or operator may use a financial assurance mechanism specified in this section to meet the requirements of this section for more than one facility. Evidence of financial assurance submitted to the Regional Administrator must include a list showing, for each facility, the EPA Identification Number, name, address, and the amount of funds for closure assured by the mechanism. If the facilities covered by the mechanism are in more than one Region, identical evidence of financial assurance must be submitted to and maintained with the Regional Administrators of all such Regions. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for closure of any of the facilities covered by the mechanism, the Regional Administrator may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

(h) *Release of the owner or operator from the requirements of this section.* Within 60 days after receiving certifications from the owner or operator and an independent registered professional engineer that final closure has been completed in accordance with the approved closure plan, the Regional Administrator will notify the owner or operator in writing that he is no longer required by this Section to maintain financial assurance for final closure of the facility, unless the Regional Administrator has reason to believe that final closure has not been in accordance with the approved closure-plan. The Regional Administrator shall provide the owner or operator a detailed written statement of any such reason to believe that closure has not been in accordance with the approved closure plan.

265.144 Cost estimate for post-closure care.

(a) The owner or operator of a hazardous waste disposal unit must have a detailed written estimate in current dollars of the annual cost of post-closure monitoring and maintenance of the facility in accordance with the applicable post-closure regulations in Sections 265.117, 265.180, 265.228, 265-258, 265.280 and 265.310.

(1) The post-closure cost estimate must be based on the costs to the owner or operator of hiring a third party to conduct post-closure care activities. A third party is a party who is neither a parent nor subsidiary of the owner or operator. (See definition of parent corporation in Section 265.141(d)).

(2) The post-closure cost estimate is calculated by multiplying the annual post-closure cost estimate by the number of years of post-closure care required under Section 265.117.

(b) During the active life of the facility, the owner or operator must adjust the post-closure cost estimate for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with Section 265.145. For owners or operators using the financial test or corporate guarantee, the post-closure care cost estimate must be updated for inflation no later than 30 days after the close of the firm's fiscal year and before submission of updated information to the Regional Administrator as specified in Section 265.145(d)(5). The adjustment may be made by recalculating the post-closure cost estimate in current dollars or by using an

inflation factor derived from the most recent Implicit Price Deflator for Gross National Product published by the U.S. Department of Commerce in its Survey of Current Business as specified in Section 265.145(b)(1) and (b)(2). The inflation factor is the result of dividing the latest published annual Deflator by the Deflator for the previous year.

(1) The first adjustment is made by multiplying the post-closure cost estimate by the inflation factor. The result is the adjusted post-closure cost estimate.

(2) Subsequent adjustments are made by multiplying the latest adjusted post-closure cost estimate by the latest inflation factor.

(c) During the active life of the facility, the owner or operator must revise the post-closure cost estimate no later than 30 days after a revision to the post-closure plan which increases the cost of post-closure care. If the owner or operator has an approved post-closure plan, the post-closure cost estimate must be revised no later than 30 days after the Regional Administrator has approved the request to modify the plan, if the change in the post-closure plan increases the cost of post-closure care. The revised post-closure cost estimate must be adjusted for inflation as specified in Section 265.144(b).

(d) The owner or operator must keep the following at the facility during the operating life of the facility: the latest post-closure cost estimate prepared in accordance with Sections 265.144(a) and (c) and, when this estimate has been adjusted in accordance with Section 265.144(b), the latest adjusted post-closure cost estimate.

265.145 Financial assurance for post-closure care.

By the effective date of these regulations, an owner or operator of a facility with a hazardous waste disposal unit must establish financial assurance for post-closure care of the disposal unit(s).

(a) *Post-closure trust fund.*

(1) An owner or operator may satisfy the requirements of this section by establishing a post-closure trust fund which conforms to the requirements of this paragraph and submitting an originally signed duplicate of the trust agreement to the Regional Administrator. The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(2) The wording of the trust agreement must be identical to the wording specified in Section 264.151(a)(1), and the trust agreement must be accompanied by a formal certification of acknowledgment (for example, see Section 264.151(a)(2). Schedule A of the trust agreement must be updated within 60 days after a change in the amount of the current post-closure cost estimate covered by the agreement.

(3) **[This federal provision was not adopted by reference; see Paragraph (h)(3) for State requirement.]**

(4) Deleted.

(5) Deleted.

(6) After the pay-in period is completed, whenever the current post-closure cost estimate changes during the operating life of the facility, the owner or operator must compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the owner or operator, within 60 days after the change in the cost estimate, must either deposit an amount into the fund so that its value after this deposit at least equals the amount of the current post-closure cost estimate, or obtain other financial assurance as specified in this section to cover the difference.

(7) During the operating life of the facility, if the value of the trust fund is greater than the total amount of the current post-closure cost estimate, the owner or operator may submit a written request to the Regional Administrator for release of the amount in excess of the current post-closure cost estimate.

(8) If an owner or operator substitutes other financial assurance as specified in this section for all or part of the trust fund, he may submit a written request to the Regional Administrator for release of the amount in excess of the current post-closure cost estimate covered by the trust fund.

(9) Within 60 days after receiving a request from the owner or operator for release of funds as specified in paragraph (a)(7) or (8) of this section, the Regional Administrator will instruct the trustee to release to the owner or operator such funds as the Regional Administrator specifies in writing.

(10) During the period of post-closure care, the Regional Administrator may approve a release of funds if the owner or operator demonstrates to the Regional Administrator that the value of the trust fund exceeds the remaining cost of post-closure care.

(11) An owner or operator or any other person authorized to conduct post-closure care may request reimbursements for post-closure expenditures by submitting itemized bills to the Regional Administrator. Within 60 days after receiving bills for post-closure care activities, the Regional Administrator will instruct the trustee to make reimbursements in those amounts as the Regional Administrator specifies in writing, if the Regional Administrator determines that the post-closure expenditures are in accordance with the approved post-closure plan or otherwise justified. If the Regional Administrator does not instruct the

trustee to make such reimbursements, he will provide the owner or operator with a detailed written statement of reasons.

(12) The Regional Administrator will agree to termination of the trust when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 265.145(h).

(b) *Surety bond guaranteeing payment into a post-closure trust fund.*

(1) An owner or operator may satisfy the requirements of this section by obtaining a surety bond which conforms to the requirements of this paragraph and submitting the bond to the Regional Administrator. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on Federal bonds in Circular 570 of the U.S. Department of the Treasury.

(2) The wording of the surety bond must be identical to the wording specified in Section 264.151(b).

(3) The owner or operator who uses a surety bond to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the bond, all payments made thereunder will be deposited by the surety directly into the standby trust fund in accordance with instructions from the Regional Administrator. This standby trust fund must meet the requirements specified in Section 265.145(a), except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the Regional Administrator with the surety bond; and

(ii) Until the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in Section 265.145(a);

(B) Updating of Schedule A of the trust agreement (see Section 264.151(a)) to show current post-closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The bond must guarantee that the owner or operator will:

(i) Fund the standby trust fund in an amount equal to the penal sum of the bond before the beginning of final closure of the facility; or

(ii) Fund the standby trust fund in an amount equal to the penal sum within 15 days after an administrative order to begin final closure issued by the Regional Administrator becomes final, or within 15 days after an order to begin final closure is issued by a U.S. district court or other court of competent jurisdiction; or

(iii) Provide alternate financial assurance as specified in this section, and obtain the Regional Administrator's written approval of the assurance provided, within 90 days after receipt by both the owner or operator and the Regional Administrator of a notice of cancellation of the bond from the surety.

(5) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond.

(6) The penal sum of the bond must be in an amount at least equal to the current post-closure cost estimate except as provided in Section 265.145(f).

(7) Whenever the current post-closure cost estimate increases to an amount greater than the penal sum, the owner or operator, within 60 days after the increase, must either cause the penal sum to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Regional Administrator, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current post-closure cost estimate decreases, the penal sum may be reduced to the amount of the current post-closure cost estimate following written approval by the Regional Administrator.

(8) Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Regional Administrator. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Regional Administrator, as evidenced by the return receipts.

(9) The owner or operator may cancel the bond if the Regional Administrator has given prior written consent based on his receipt of evidence of alternate financial assurance as specified in this section.

(c) *Post-closure letter of credit.*

(1) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit which conforms to the requirements of this paragraph and submitting the letter to the Regional Administrator. The issuing institution must be an entity which has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a Federal or State agency.

(2) The wording of the letter of credit must be identical to the wording specified in Section 264.151(d).

(3) An owner or operator who uses a letter of credit to satisfy the requirements of this section must also establish a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft

by the Regional Administrator will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Regional Administrator. This standby trust fund must meet the requirements of the trust fund specified in Section 265.145(a), except that:

(i) An originally signed duplicate of the trust agreement must be submitted to the Regional Administrator with the letter of credit; and

(ii) Unless the standby trust fund is funded pursuant to the requirements of this section, the following are not required by these regulations:

(A) Payments into the trust fund as specified in Section 265.145(a);

(B) Updating of Schedule A of the trust agreement (see Section 264.151(a)) to show current post-closure cost estimates;

(C) Annual valuations as required by the trust agreement; and

(D) Notices of nonpayment as required by the trust agreement.

(4) The letter of credit must be accompanied by a letter from the owner or operator referring to the letter of credit by number, issuing institution, and date, and providing the following information: the EPA Identification Number, name, and address of the facility, and the amount of funds assured for post-closure care of the facility by the letter of credit.

(5) The letter of credit must be irrevocable and issued for a period of at least 1 year. The letter of credit must provide that the expiration date will be automatically extended for a period of at least 1 year unless, at least 120 days before the current expiration date, the issuing institution notifies both the owner or operator and the Regional Administrator by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days will begin on the date when both the owner or operator and the Regional Administrator have received the notice, as evidenced by the return receipts.

(6) The letter of credit must be issued in an amount at least equal to the current post-closure cost estimate, except as provided in Section 265.145(f).

(7) Whenever the current post-closure cost estimate increases to an amount greater than the amount of the credit during the operating life of the facility, the owner or operator, within 60 days after the increase, must either cause the amount of the credit to be increased so that it at least equals the current post-closure cost estimate and submit evidence of such increase to the Regional Administrator, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the amount of the credit may be reduced to the amount of the current post-closure cost estimate following written approval by the Regional Administrator.

(8) During the period of post-closure care, the Regional Administrator may approve a decrease in the amount of the letter of credit if the owner or operator demonstrates to the Regional Administrator that the amount exceeds the remaining cost of post-closure care.

(9) Following a final administrative determination pursuant to Section 3008 of RCRA that the owner or operator has failed to perform post-closure care in accordance with the approved post-closure plan and other permit requirements, the Regional Administrator may draw on the letter of credit.

(10) If the owner or operator does not establish alternate financial assurance as specified in this section and obtain written approval of such alternate assurance from the Regional Administrator within 90 days after receipt by both the owner or operator and the Regional Administrator of a notice from the issuing institution that it has decided not to extend the letter of credit beyond the current expiration date, the Regional Administrator will draw on the letter of credit. The Regional Administrator may delay the drawing if the issuing institution grants an extension of the term of the credit. During the last 30 days of any such extension the Regional Administrator will draw on the letter of credit if the owner or operator has failed to provide alternate financial assurance as specified in this section and obtain written approval of such assurance from the Regional Administrator.

(11) The Regional Administrator will return the letter of credit to the issuing institution for termination when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 265.145(h).

(d) *Post-closure insurance.*

(1) An owner or operator may satisfy the requirements of this section by obtaining post-closure insurance which conforms to the requirements of this paragraph and submitting a certificate of such insurance to the Regional Administrator. By the effective date of these regulations the owner or operator must submit to the Regional Administrator a letter from an insurer stating that the insurer is considering issuance of post-closure insurance conforming to the requirements of this paragraph to the owner or operator. Within 90 days after the effective date of these regulations, the owner or operator must submit the certificate of insurance to the Regional Administrator or establish other financial assurance as specified in this section. At a minimum, the insurer must be licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(2) The wording of the certificate of insurance must be identical to the wording specified in Section 264.151(e).

(3) The post-closure insurance policy must be issued for a face amount at least equal to the current post-closure cost estimate, except as provided in Section 265.145(f). The term "face amount" means the total amount the insurer is obligated to pay under the policy. Actual payments by the insurer will not change the face amount, although the insurer's future liability will be lowered by the amount of the payments.

(4) The post-closure insurance policy must guarantee that funds will be available to provide post-closure care of the facility whenever the post-closure period begins. The policy must also guarantee that once post-closure care begins the insurer will be responsible for paying out funds, up to an amount equal to the face amount of the policy, upon the direction of the Regional Administrator, to such party or parties as the Regional Administrator specifies.

(5) An owner or operator or any other person authorized to perform post-closure care may request reimbursement for post-closure care expenditures by submitting itemized bills to the Regional Administrator. Within 60 days after receiving bills for post-closure care activities, the Regional Administrator will instruct the insurer to make reimbursements in those amounts as the Regional Administrator specifies in writing, if the Regional Administrator determines that the post-closure expenditures are in accordance with the approved post-closure plan or otherwise justified. If the Regional Administrator does not instruct the insurer to make such reimbursements, he will provide a detailed written statement of reasons.

(6) The owner or operator must maintain the policy in full force and effect until the Regional Administrator consents to termination of the policy by the owner or operator as specified in paragraph (d)(11) of this section. Failure to pay the premium, without substitution of alternate financial assurance as specified in the section, will constitute a significant violation of these regulations, warranting such remedy as the Regional Administrator deems necessary.Such violation will be deemed to begin upon receipt by the Regional Administrator of a notice of future cancellation, termination, or failure to renew due to nonpayment of the premium, rather than upon the date of expiration.

(7) Each policy must contain a provision allowing assignment of the policy to a successor owner or operator. Such assignment may be conditional upon consent of the insurer, provided such consent is not unreasonably refused.

(8) The policy must provide that the insurer may not cancel, terminate, or fail to renew the policy except for failure to pay the premium. The automatic renewal of the policy must, at a minimum, provide the insured with the option of renewal at the face amount of the expiring policy. If there is a failure to pay the premium, the insurer may elect to cancel, terminate, or fail to renew the policy by sending notice by certified mail to the owner or operator and the Regional Administrator. Cancellation, termination, or failure to renew may not occur, however, during the 120 days beginning with the date of receipt of the notice by both the Regional Administrator and the owner or operator, as evidenced by the return receipts. Cancellation, termination, or failure to renew may not occur and the policy will remain in full force and effect in the event that on or before the date of expiration:

  (i) The Regional Administrator deems the facility abandoned; or

  (ii) Interim status is terminated or revoked; or

  (iii) Closure is ordered by the Regional Administrator or a U.S. district court or other court of competent jurisdiction; or

  (iv) The owner or operator is named as debtor in a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code; or

  (v) The premium due is paid.

(9) Whenever the current post-closure cost estimate increases to an amount greater than the face amount of the policy during the operating life of the facility, the owner or operator, within 60 days after the increase, must either cause the face amount to be increased to an amount at least equal to the current post-closure cost estimate and submit evidence of such increase to the Regional Administrator, or obtain other financial assurance as specified in this section to cover the increase. Whenever the current post-closure cost estimate decreases during the operating life of the facility, the face amount may be reduced to the amount of the current post-closure cost estimate following written approval by the Regional Administrator.

(10) Commencing on the date that liability to make payments pursuant to the policy accrues, the insurer will thereafter annually increase the face amount of the policy. Such increase must be equivalent to the face amounts of the policy, less any payments made, multiplied by an amount equivalent to 85 percent of the most recent investment rate or of the equivalent coupon-issue yield announced by the U.S. Treasury for 26-week Treasury securities.

(11) The Regional Administrator will give written consent to the owner or operator that he may terminate the insurance policy when:

  (i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 265.145(h).

(e) *Financial test and corporate guarantee for post-closure care.*

(1) An owner or operator may satisfy the requirements of this section by demonstrating that he passes a financial test as specified in this paragraph. To pass the test the owner or operator must meet the criteria either of paragraph (e)(1)(i) or (e)(1)(ii) of this section:

(i) The owner or operator must have:

(A) Two of the following three ratios: a ratio of total liabilities to net worth less than 2.0 of a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

(B) Net working capital and tangible net worth each at least six times the sum of the current closure and post-closure cost estimates and current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least $10 million; and

(D) Assets in the United States amounting to at least 90 percent of his total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(ii) The owner or operator must have:

(A) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or Aaa, Aa, A, or Baa as issued by Moody's; and

(B) Tangible net worth at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates; and

(C) Tangible net worth of at least $10 million; and

(D) Assets located in the United States amounting to at least 90 percent of his total assets or at least six times the sum of the current closure and post-closure cost estimates and the current plugging and abandonment cost estimates.

(2) The phrase "current closures and post-closure cost estimates" as used in paragraph (e)(1) of this section refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (Section 264.151(f)) The phrase "current plugging and abandonment cost estimates" as used in paragraph (e)(1) of this section refers to the cost estimates required to be shown in paragraphs 1-4 of the letter from the owner's or operator's chief financial officer (Section 144.70(f) of this Title).

(3) To demonstrate that he meets this test the owner or operator must submit the following items to the Regional Administrator;

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in Section 264.151(f); and

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year; and

(iii) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(A) He has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

(B) In connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

(4) The owner or operator may obtain an extension of the time allowed for submission of the documents specified in paragraph (e)(3) of this section if the fiscal year of the owner or operator ends during the 90 days prior to the effective date of these regulations and if the year-end financial statements for that fiscal year will be audited by an independent certified public accountant. The extension will end no later than 90 days after the end of the owner's or operator's fiscal year. To obtain the extension, the owner's or operator's chief financial officer must send, by the effective date of these regulations, a letter to the Regional Administrator of each Region in which the owner's or operator's facilities to be covered by the financial test are located. This letter from the chief financial officer must:

(i) Request the extension;

(ii) Certify that he has grounds to believe that the owner or operator meets the criteria of the financial test;

(iii) Specify for each facility to be covered by the test the EPA Identification Number, name, address, and the current closure and post-closure cost estimates to be covered by the test;

(iv) Specify the date ending the owner's or operator's latest complete fiscal year before the effective date of these regulations;

(v) Specify the date, no later than 90 days after the end of such fiscal year, when he will submit the documents specified in paragraph (e)(3) of this section; and

(vi) Certify that the year-end financial statements of the owner or operator for such fiscal year will be audited by an independent certified public accountant.

(5) After the initial submission of items specified in paragraph (e)(3) of this section, the owner or operator must send updated information to the Regional Administrator within 90 days after the close of each succeeding fiscal year. This information must consist of all three items specified in paragraph (e)(3) of this section.

(6) If the owner or operator no longer meets the requirements of paragraph (e)(1) of this section, he must send notice to the Regional Administrator of intent to establish alternate financial assurance as specified in this section. The notice must be sent by certified mail within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the requirements. The owner or operator must provide the alternate financial assurance within 120 days after the end of such fiscal year.

(7) The Regional Administrator may, based on a reasonable belief that the owner or operator may no longer meet the requirements of paragraph (e)(1) of this section, require reports of financial condition at any time from the owner or operator in addition to those specified in paragraph (e)(3) of this section. If the Regional Administrator finds, on the basis of such reports or other information, that the owner or operator no longer meets the requirements of paragraph (e)(1) of this section, the owner or operator must provide alternate financial assurance as specified in this section within 30 days after notification of such a finding.

(8) The Regional Administrator may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see paragraph (e)(3)(ii) of this section). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The Regional Administrator will evaluate other qualifications on an individual basis. The owner or operator must provide alternate financial assurance as specified in this section within 30 days after notification of the disallowance.

(9) During the period of post-closure care, the Regional Administrator may approve a decrease in the current post-closure cost estimate for which this test demonstrates financial assurance if the owner or operator demonstrates to the Regional Administrator that the amount of the cost estimate exceeds the remaining cost of post-closure care.

(10) The owner or operator is no longer required to submit the items specified in paragraph (e)(3) of this section when:

(i) An owner or operator substitutes alternate financial assurance as specified in this section; or

(ii) The Regional Administrator releases the owner or operator from the requirements of this section in accordance with Section 265.145(h).

(11) An owner or operator may meet the requirements of this section by obtaining a written guarantee. The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in paragraphs (e)(1) through (9) of this section and must comply with the terms of the guarantee. The wording of the guarantee must be identical to the wording specified in Section 264.151(h). A certified copy of the guarantee must accompany the items sent to the Regional Administrator as specified in paragraph (e)(3) of this section. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, the letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee. The terms of the guarantee must provide that:

(i) If the owner or operator fails to perform post-closure care of a facility covered by the corporate guarantee in accordance with the post-closure plan and other interim status requirements whenever required to do so, the guarantor will do so or establish a trust fund as specified in Section 265.145(a) in the name of the owner or operator.

(ii) The corporate guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the owner or operator and to the Regional Administrator. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the owner or operator and the Regional Administrator, as evidenced by the return receipts.

(iii) If the owner or operator fails to provide alternate financial assurance as specified in this section and obtain the written approval of such alternate assurance from the Regional Administrator within 90 days after receipt by both the owner or operator and the Regional Administrator of a notice of cancellation of the corporate guarantee from the guarantor, the guarantor will provide such alternate financial assurance in the name of the owner or operator.

(f) *Use of multiple financial mechanisms.* An owner or operator may satisfy the requirements of this section by establishing more than one financial mechanism per facility. These mechanisms are limited to trust funds, surety bonds, letters of credit, and insurance. The mechanisms must be as specified in paragraphs (a) through (d), respectively, of this section, except that it is the combination of mechanisms, rather than the single mechanism, which must provide financial assurance for an amount at least equal to the current post-closure cost estimate. If an owner or operator uses a trust fund in combination with a surety bond or a letter of credit, he may use the trust fund as the standby trust fund for the other mechanisms. A single standby trust fund may be established for two or more mechanisms. The Regional Administrator may use any or all of the mechanisms to provide for post-closure care of the facility.

(g) *Use of a financial mechanism for multiple facilities.* An owner or operator may use a financial assurance mechanism specified in this section to meet the requirements of this section for more than one facility. Evidence of financial assurance submitted to the Regional Administrator must include a list showing, for each facility, the EPA Identification Number, name, address, and the amount of funds for post-closure care assured by the mechanism. If the facilities covered by the mechanisms are in more than one Region, identical evidence of financial assurance must be submitted to and maintained with the Regional Administrators of all such Regions. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for each facility. In directing funds available through the mechanism for post-closure care of any of the facilities covered by the mechanism, the Regional Administrator may direct only the amount of funds designated for that facility, unless the owner or operator agrees to the use of additional funds available under the mechanism.

(h) *Release of the owner or operator from the requirements of this section.* Within 60 days after receiving certifications from the owner or operator and an independent registered professional engineer that the post-closure care period has been completed in accordance with the approved post-closure plan, the Regional Administrator will notify the owner or operator in writing that he is no longer required by this Section to maintain financial assurance for post-closure care of that unit, unless the Regional Administrator has reason to believe that post-closure care has not been in accordance with the approved post-closure plan. The Regional Administrator will provide the owner or operator a detailed written statement of any such reason to believe that post-closure care has not been in accordance with the approved post-closure plan.

265.146 Use of a mechanism for financial assurance of both closure and post-closure care.

An owner or operator may satisfy the requirements for financial assurance for both closure and post-closure care for one or more facilities by using a trust fund, surety bond, letter of credit, insurance, financial test, or corporate guarantee that meets the specifications for the mechanism in both Sections 265.143 and 265.145. The amount of funds available through the mechanism must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for financial assurance of closure and of post-closure care.

265.147 Liability requirements.

(a) *Coverage for sudden accidental occurrences.* An owner or operator of a hazardous waste treatment, storage, or disposal facility, or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator must have and maintain liability coverage for sudden accidental occurrences in the amount of at least $1 million per occurrence with an annual aggregate of at least $2 million, exclusive of legal defense costs. This liability coverage may be demonstrated as specified in paragraphs (a)(1), (2), (3), (4), (5), or (6) of this section:

(1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this paragraph.

(i) Each insurance policy must be amended by attachment of the Hazardous Waste Facility Liability Endorsement, or evidenced by a Certificate of Liability Insurance. The wording of the endorsement must be identical to the wording specified in Section 264.151(i). The wording of the certificate of insurance must be identical to the wording specified in Section 264.151(j). The owner or operator must submit a signed duplicate original of the endorsement or the certificate of insurance to the Regional Administrator, or Regional Administrator if facilities are located in more than one Region. If requested by a Regional Administrator, the owner or operator must provide a signed duplicate original of the insurance policy.

(ii) Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(2) An owner or operator may meet the requirements of this section by passing a financial test or using the guarantee for liability coverage as specified in paragraphs (f) and (g) of this section.

(3) An owner or operator may meet the requirements of this section by obtaining a letter of credit for liability coverage as specified in paragraph (h) of this section.

(4) An owner or operator may meet the requirements of this section by obtaining a surety bond for liability coverage as specified in paragraph (i) of this section.

(5) An owner or operator may meet the requirements of this section by obtaining a trust fund for liability coverage as specified in paragraph (j) of this section.

(6) An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amounts required by this section. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this paragraph, the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.

(7) An owner or operator shall notify the Regional Administrator in writing within 30 days whenever

(i) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in paragraphs (a)(1) through (a)(6) of this section; or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under paragraphs (a)(1) through (a)(6) of this section; or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under paragraphs (a)(1) through (a)(6) of this section.

(b) *Coverage for nonsudden accidental occurrences.*

An owner or operator of a surface impoundment, landfill, or land treatment facility which is used to manage hazardous waste, or a group of such facilities, must demonstrate financial responsibility for bodily injury and property damage to third parties caused by nonsudden accidental occurrences arising from operations of the facility or group of facilities. The owner or operator must have and maintain liability coverage for nonsudden accidental occurrences in the amount of at least $3 million per occurrence with an annual aggregate of at least $6 million, exclusive of legal defense costs. An owner or operator who must meet the requirements of this section may combine the required per-occurrence coverage levels for sudden and nonsudden accidental occurrences into a single per-occurrence level, and combine the required annual aggregate coverage levels for sudden and nonsudden accidental occurrences into a single annual aggregate level. Owners or operators who combine coverage levels for sudden and nonsudden accidental occurrences must maintain liability coverage in the amount of at least $4 million per occurrence and $8 million annual aggregate. This liability coverage may be demonstrated as specified in paragraphs (b) (1), (2), (3), (4), (5), or (6), of this section:

(1) An owner or operator may demonstrate the required liability coverage by having liability insurance as specified in this paragraph.

(i) Each insurance policy must be amended by attachment of the Hazardous Waste Facility Liability Endorsement or evidenced by a Certificate of Liability Insurance. The wording of the endorsement must be identical to the wording specified in Section 264.151(i). The wording of the certificate of insurance must be identical to the wording specified in Section 264.151(j). The owner or operator must submit a signed duplicate original of the endorsement or the certificate of insurance to the Regional Administrator, or Regional Administrators if the facilities are located in more than one Region. If requested by a Regional Administrator, the owner or operator must provide a signed duplicate original of the insurance policy.

(ii) Each insurance policy must be issued by an insurer which, at a minimum, is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States.

(2) An owner or operator may meet the requirements of this section by passing a financial test or using the guarantee for liability coverage as specified in paragraphs (f) and (g) of this section.

(3) An owner or operator may meet the requirements of this section by obtaining a letter of credit for liability coverage as specified in paragraph (h) of this section.

(4) An owner or operator may meet the requirements of this section by obtaining a surety bond for liability coverage as specified in paragraph (i) of this section.

(5) An owner or operator may meet the requirements of this section by obtaining a trust fund for liability coverage as specified in paragraph (j) of this section.

(6) An owner or operator may demonstrate the required liability coverage through the use of combinations of insurance, financial test, guarantee, letter of credit, surety bond, and trust fund, except that the owner or operator may not combine a financial test covering part of the liability coverage requirement with a guarantee unless the financial statement of the owner or operator is not consolidated with the financial statement of the guarantor. The amounts of coverage demonstrated must total at least the minimum amounts required by this section. If the owner or operator demonstrates the required coverage through the use of a combination of financial assurances under this paragraph, the owner or operator shall specify at least one such assurance as "primary" coverage and shall specify other assurance as "excess" coverage.

(7) An owner or operator shall notify the Regional Administrator in writing within 30 days whenever:

(i) A claim results in a reduction in the amount of financial assurance for liability coverage provided by a financial instrument authorized in paragraphs (b)(1) through (b)(6) of this section; or

(ii) A Certification of Valid Claim for bodily injury or property damages caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is entered between the owner or operator and third-party claimant for liability coverage under paragraphs (b)(1) through (b)(6) of this section; or

(iii) A final court order establishing a judgment for bodily injury or property damage caused by a sudden or non-sudden accidental occurrence arising from the operation of a hazardous waste treatment, storage, or disposal facility is issued against the owner or operator or an instrument that is providing financial assurance for liability coverage under paragraphs (b)(1) through (b)(6) of this section.

(c) *Request for variance.*

If an owner or operator can demonstrate to the satisfaction of the Regional Administrator that the levels of financial responsibility required by paragraph (a) or (b) of this section are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the owner or operator may obtain a variance from the Regional Administrator. The request for a variance must be submitted in writing, to the Regional Administrator. If granted, the variance will take the form of an adjusted level of required liability coverage, such level to be based on the Regional Administrator's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. The Regional Administrator may require an owner or operator who requests a variance to provide such technical and engineering information as is deemed necessary by the Regional Administrator to determine a level of financial responsibility other than that required by paragraph (a) or (b) of this section. The Regional Administrator will process a variance request as if it were a permit modification request under Section 270.41(a)(5) of this chapter and subject to the procedures of Section 124.5 of this chapter. Notwithstanding any other provision, the Regional Administrator may hold a public hearing at his discretion or whenever he finds, on the basis of requests for a public hearing, a significant degree of public interest in a tentative decision to grant a variance.

(d) *Adjustments by the Regional Administrator.*

If the Regional Administrator determines that the levels of financial responsibility required by paragraph (a) or (b) of this section are not consistent with the degree and duration of risk associated with treatment, storage, or disposal at the facility or group of facilities, the Regional Administrator may adjust the level of financial responsibility required under paragraph (a) or (b) of this section as may be necessary to protect human health and the environment. This adjusted level will be based on the Regional Administrator's assessment of the degree and duration of risk associated with the ownership or operation of the facility or group of facilities. In addition, if the Regional Administrator determines that there is a significant risk to human health and the environment from nonsudden accidental occurrences resulting from the operations of a facility that is not a surface impoundment, landfill, or land treatment facility, he may require that an owner or operator of the facility comply with paragraph (b) of this section. An owner or operator must furnish to the Regional Administrator, within a reasonable time, any information which the Regional Administrator requests to determine whether cause exists for such adjustments of level or type of coverage. The Regional Administrator will process an adjustment of the level of required coverage as if it were a permit modification under Section 270.41(a)(5) of this chapter and subject to the procedures of Section 124.5 of this chapter. Notwithstanding any other provision, the Regional Administrator may hold a public hearing at his discretion or whenever he finds, on the basis of requests for a public hearing, a significant degree of public interest in a tentative decision to adjust the level or type of required coverage.

(e) *Period of coverage.*

Within 60 days after receiving certifications from the owner or operator and an independent registered professional engineer that final closure has been completed in accordance with the approved closure plan, the Regional Administrator will notify the owner or operator in writing that he is no longer required by this section to maintain liability coverage for that facility, unless the Regional Administrator has reason to believe that closure has not been in accordance with the approved closure plan.

(f) *Financial test for liability coverage.*

(1) An owner or operator may satisfy the requirements of this section by demonstrating that he passes a financial test as specified in this paragraph. To pass this test the owner or operator must meet the criteria of paragraph (f)(1)(i) or (ii) of this section:

(i) The owner or operator must have:

(A) Net working capital and tangible net worth each at least six times the amount of liability coverage to be demonstrated by this test; and

(B) Tangible net worth of at least $10 million; and

(C) Assets in the United States amounting to either:

(1) At least 90 percent of his total assets; or

(2) at least six times the amount of liability coverage to be demonstrated by this test.

(ii) The owner or operator must have:

(A) A current rating for his most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's, or Aaa, Aa, A, or Baa as issued by Moody's; and

(B) Tangible net worth of at least $10 million; and

(C) Tangible net worth at least six times the amount of liability coverage to be demonstrated by this test; and

(D) Assets in the United States amounting to either:

(1) At least 90 percent of his total assets; or

(2) at least six times the amount of liability coverage to be demonstrated by this test.

(2) The phrase "amount of liability coverage" as used in paragraph (f)(1) of this section refers to the annual aggregate amounts for which coverage is required under paragraphs (a) and (b) of this section.

(3) To demonstrate that he meets this test, the owner or operator must submit the following three items to the Regional Administrator:

(i) A letter signed by the owner's or operator's chief financial officer and worded as specified in Section 264.151(g). If an owner or operator is using the financial test to demonstrate both assurance for closure or post-closure care, as specified by Sections 264.143(f), 264.145(f), 265.143(e), and 265.145(e), and liability coverage, he must submit the letter specified in Section 264.151(g) to cover both forms of financial responsibility; a separate letter as specified in Section 264.151(f) is not required..

(ii) A copy of the independent certified public accountant's report on examination of the owner's or operator's financial statements for the latest completed fiscal year.

(iii) A special report from the owner's or operator's independent certified public accountant to the owner or operator stating that:

(A) He has compared the data which the letter from the chief financial officer specifies as having been derived from the independently audited, year-end financial statements for the latest fiscal year with the amounts in such financial statements; and

(B) In connection with that procedure, no matters came to his attention which caused him to believe that the specified data should be adjusted.

(4) The owner or operator may obtain a one-time extension of the time allowed for submission of the documents specified in paragraph (f)(3) of this section if the fiscal year of the owner or operator ends during the 90 days prior to the effective date of these regulations and if the year-end financial statements for that fiscal year will be audited by an independent certified public accountant. The extension will end no later than 90 days after the end of the owner's or operator's fiscal year. To obtain the extension, the owner's or operator's chief financial officer must send, by the effective date of these regulations, a letter to the Regional Administrator of each Region in which the owner's or operator's facilities to be covered by the financial test are located. This letter from the chief financial officer must:

(i) Request the extension;

(ii) Certify that he has grounds to believe that the owner or operator meets the criteria of the financial test;

(iii) Specify for each facility to be covered by the test the EPA Identification Number, name, address, the amount of liability coverage and, when applicable, current closure and post-closure cost estimates to be covered by the test;

(iv) Specify the date ending the owner's or operator's last complete fiscal year before the effective date of these regulations;

(v) Specify the date, no later than 90 days after the end of such fiscal year, when he will submit the documents specified in paragraph (f)(3) of this section; and

(vi) Certify that the year-end financial statements of the owner or operator for such fiscal year will be audited by an independent certified public accountant.

(5) After the initial submission of items specified in paragraph (f)(3) of this section, the owner or operator must send updated information to the Regional Administrator within 90 days after the close of each

succeeding fiscal year. This information must consist of all three items specified in paragraph (f)(3) of this section.

(6) If the owner or operator no longer meets the requirements of paragraph (f)(1) of this section, he must obtain insurance, a letter of credit, a surety bond, a trust fund, or a guarantee for the entire amount of required liability coverage as specified in this section. Evidence of liability coverage must be submitted to the Regional Administrator within 90 days after the end of the fiscal year for which the year-end financial data show that the owner or operator no longer meets the test requirements.

(7) The Regional Administrator may disallow use of this test on the basis of qualifications in the opinion expressed by the independent certified public accountant in his report on examination of the owner's or operator's financial statements (see paragraph (f)(3)(ii) of this section). An adverse opinion or a disclaimer of opinion will be cause for disallowance. The Regional Administrator will evaluate other qualifications on an individual basis. The owner or operator must provide evidence of insurance for the entire amount of required liability coverage as specified in this section within 30 days after notification of disallowance.

(g) *Guarantee for liability coverage.*

(1) Subject to paragraph (g)(2) of this section, an owner or operator may meet the requirements of this section by obtaining a written guarantee, hereinafter referred to as "guarantee." The guarantor must be the direct or higher-tier parent corporation of the owner or operator, a firm whose parent corporation is also the parent corporation of the owner or operator, or a firm with a "substantial business relationship" with the owner or operator. The guarantor must meet the requirements for owners or operators in paragraphs (f)(1) through (f)(6) of this section. The wording of the guarantee must be identical to the wording specified in Section 264.151(h)(2) of this chapter. A certified copy of the guarantee must accompany the items sent to the Regional Administrator as specified in paragraph (f)(3) of this section. One of these items must be the letter from the guarantor's chief financial officer. If the guarantor's parent corporation is also the parent corporation of the owner or operator, this letter must describe the value received in consideration of the guarantee. If the guarantor is a firm with a "substantial business relationship" with the owner or operator, this letter must describe this "substantial business relationship" and the value received in consideration of the guarantee.

(i) If the owner or operator fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden or nonsudden accidental occurrences (or both as the case may), arising from the operation of facilities covered by this corporate guarantee, or fails to pay an amount agreed to in settlement of claims arising from or alleged to arise from such injury or damage, the guarantor will do so up to the limits of coverage.

(ii) Reserved

(2) (i) In the case of corporations incorporated in the United States, a guarantee may be used to satisfy the requirements of this section only if the Attorneys General or Insurance Commissioners of (A) the State in which the guarantor is incorporated, and (B) each State in which a facility covered by the guarantee is located have submitted a written statement to EPA that a guarantee executed as described in this section and Section 264.151(h)(2) is a legally valid and enforceable obligation in that State.

(ii) In the case of corporations incorporated outside the United States, a corporate guarantee may be used to satisfy the requirements of this section only if (A) the non-U.S. corporation has identified a registered agent for service of process in each State in which a facility covered by the guarantee is located and in the State in which it has its principal place of business, and if (B) the Attorney General or Insurance Commissioner of each State in which a facility covered by the guarantee is located and the State in which the guarantor corporation has its principal place of business, has submitted a written statement to EPA that a corporate guarantee executed as described in this section and Section 264.151(h)(2) is a legally valid and enforceable obligation in that State.

(h) *Letter of credit for liability coverage.*

(1) An owner or operator may satisfy the requirements of this section by obtaining an irrevocable standby letter of credit that conforms to the requirements of this paragraph and submitting a copy of the letter of credit to the Regional Administrator.

(2) The financial institution issuing the letter of credit must be an entity that has the authority to issue letters of credit and whose letter of credit operations are regulated and examined by a Federal or State agency.

(3) The wording of the letter of credit must be identical to the wording specified in Section 264.151(k) of this chapter.

(4) An owner or operator who uses a letter of credit to satisfy the requirements of this section may also establish a standby trust fund. Under the terms of such a letter of credit, all amounts paid pursuant to a draft by the trustee of the standby trust will be deposited by the issuing institution into the standby trust in accordance with instructions from the trustee. The trustee of the standby trust fund must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(5) The wording of the standby trust fund must be identical to the wording specified in Section 264.151(n).

(i) *Surety bond for liability coverage.*

(1) An owner or operator may satisfy the requirements of this section by obtaining a surety bond that conforms to the requirements of this paragraph and submitting a copy of the bond to the Regional Administrator.

(2) The surety company issuing the bond must be among those listed as acceptable sureties on Federal bonds in the most recent Circular 570 of the U.S. Department of the Treasury.

(3) The wording of the surety bond must be identical to the wording specified in Section 264.151(1) of this chapter.

(4) A surety bond may be used to satisfy the requirements of this section only if the Attorneys General or Insurance Commissioners of (i) the State in which the surety is incorporated, and (ii) each State in which a facility covered by the surety bond is located have submitted a written statement to EPA that a surety bond executed as described in this section and Section 264.151(1) of this chapter is a legally valid and enforceable obligation in that State.

(j) *Trust fund for liability coverage.*

(1) An owner or operator may satisfy the requirements of this section by establishing a trust fund that conforms to the requirements of this paragraph and submitting an originally signed duplicate of the trust agreement to the Regional Administrator.

(2) The trustee must be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(3) The trust fund for liability coverage must be funded for the full amount of the liability coverage to be provided by the trust fund before it may be relied upon to satisfy the requirements of this section. If at any time after the trust fund is created the amount of funds in the trust fund is reduced below the full amount of the liability coverage to be provided, the owner or operator, by the anniversary date of the establishment of the Fund, must either add sufficient funds to the trust fund to cause its value to equal the full amount of liability coverage to be provided, or obtain other financial assurance as specified in this section to cover the difference. For purposes of this paragraph, "the full amount of the liability coverage to be provided" means the amount of coverage for sudden and/or nonsudden occurrences required to be provided by the owner or operator by this section, less the amount of financial assurance for liability coverage that is being provided by other financial assurance mechanisms being used to demonstrate financial assurance by the owner or operator.

(4) The wording of the trust fund must be identical to the wording specified in Section 264.151(m) of this part.

(k) Notwithstanding any other provision of this part, an owner or operator using liability insurance to satisfy the requirements of this section may use, until October 16, 1982, a Hazardous Waste Facility Liability Endorsement or Certificate of Liability Insurance that does not certify that the insurer is licensed to transact the business of insurance, or eligible as an excess or surplus lines insurer, in one or more States.

265.148 Incapacity of owners or operators, guarantors, or financial institutions.

(a) An owner or operator must notify the Regional Administrator by certified mail of the commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the owner or operator as debtor, within 10 days after commencement of the proceeding. A guarantor of a corporate guarantee as specified in Sections 265.143(e) and 265.145(e) must make such a notification if he is named as debtor, as required under the terms of the corporate guarantee (Section 264.151(h)).

(b) An owner or operator who fulfills the requirements of Sections 265.143, 265.145, or 265.147 by obtaining a trust fund, surety bond, letter of credit, or insurance policy will be deemed to be without the required financial assurance or liability coverage in the event of bankruptcy of the trustee or issuing institution, or a suspension or revocation of the authority of the trustee institution to act as trustee or of the institution issuing the surety bond, letter of credit, or insurance policy to issue such instruments. The owner or 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 this subpart but where the State has hazardous waste regulations that include requirements for financial assurance of closure or post-closure care or liability coverage, an owner or operator may use State-required financial mechanisms to meet the requirements of Sections 265.143, 265.145, or 265.147 if the Regional Administrator determines that the State mechanisms are at least equivalent to the financial mechanisms specified in this subpart. The Regional Administrator will evaluate the equivalency of the mechanisms principally in terms of (1) certainty of the availability of funds for the required closure or post-closure care activities or liability coverage and (2) the amount of funds that will be made

available. The Regional Administrator may also consider other factors as he deems appropriate. The owner or operator must submit to the Regional Administrator evidence of the establishment of the mechanism together with a letter requesting that the State-required mechanism be considered acceptable for meeting the requirements of this subpart. The submission must include the following information: The facility's EPA Identification Number, name, and address, and the amount of funds for closure or post-closure care or liability coverage assured by the mechanism. The Regional Administrator will notify the owner or operator of his determination regarding the mechanism's acceptability in lieu of financial mechanisms specified in this subpart. The Regional Administrator may require the owner or operator to submit additional information as is deemed necessary to make this determination. Pending this determination, the owner or operator will be deemed to be in compliance with the requirements of Sections 265.143, 265.145, or 265.147, as applicable.

(b) If a State-required mechanism is found acceptable as specified in paragraph (a) of this section except for the amount of funds available, the owner or operator may satisfy the requirements of this subpart by increasing the funds available through the State-required mechanism or using additional financial mechanisms as specified in this subpart. The amount of funds available through the State and Federal mechanisms must at least equal the amount required by this subpart.

265.150 State assumption of responsibility.

(a) If a State either assumes legal responsibility for an owner's or operator's compliance with the closure, post-closure care, or liability requirements of this part or assures that funds will be available from State sources to cover those requirements, the owner or operator will be in compliance with the requirements of Sections 265.143, 265.145, or 265.147 if the Regional Administrator determines that the State's assumption of responsibility is at least equivalent to the financial mechanisms specified in this subpart. The Regional Administrator will evaluate the equivalency of State guarantees principally in terms of (1) certainty of the availability of funds for the required closure or post-closure care activities or liability coverage and (2) the amount of funds that will be made available. The Regional Administrator may also consider other factors as he deems appropriate. The owner or operator must submit to the Regional Administrator a letter from the State describing the nature of the State's assumption of responsibility together with a letter from the owner or operator requesting that the State's assumption of responsibility be considered acceptable for meeting the requirements of this subpart. The letter from the State must include, or have attached to it, the following information: the facility's EPA Identification Number, name, and address, and the amount of funds for closure or post-closure care or liability coverage that are guaranteed by the State. The Regional Administrator will notify the owner or operator of his determination regarding the acceptability of the State's guarantee in lieu of financial mechanisms specified in this subpart. The Regional Administrator may require the owner or operator to submit additional information as is deemed necessary to make this determination. Pending this determination, the owner or operator will be deemed to be in compliance with the requirements of Sections 265.143, 265.145, or 265.147, as applicable.

(b) If a State's assumption of responsibility is found acceptable as specified in paragraph (a) of this section except for the amount of funds available, the owner or operator may satisfy the requirements of this subpart by use of both the State's assurance and additional financial mechanisms as specified in this subpart. The amount of funds available through the State and Federal mechanisms must at least equal the amount required by this subpart.

(i) 40 CFR 265.170 through 265.178 (Subpart I), "Use and Management of Containers", are incorporated by reference including subsequent amendments and editions. Additionally, the owner or operator shall keep records and results of required inspections for at least three years from the date of the inspection.

SUBPART I - USE AND MANAGEMENT OF CONTAINERS

265.170 Applicability.

The regulations in this subpart apply to owners and operators of all hazardous waste facilities that store containers of hazardous waste, except as Section 265.1 provides otherwise.

265.171 Condition of containers.

If a container holding hazardous waste is not in good condition or if it begins to leak, the owner or operator must transfer the hazardous waste from this container to a container that is in good condition, or manage the waste in some other way that complies with the requirements of this part.

265.172 Compatibility of waste with containers.

The owner or operator must use a container made of or lined with materials which will not react with, and are otherwise compatible 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, except when it is necessary to add or remove waste.
(b) A container holding hazardous waste must not be opened, handled, or stored in a manner which may rupture the container or cause it to leak.

[Comment: Reuse of containers in transportation is governed by U.S. Department of Transportation regulations including those set forth in 49 CFR 173.28.]

265.174 Inspections.

The owner or operator must inspect areas where containers are stored, at least weekly, looking for leaks and for deterioration caused by corrosion or other factors.

265.175 [Reserved]

265.176 Special requirements for ignitable or reactive waste.

Containers holding ignitable or reactive waste must be located at least 15 meters (50 feet) from the facility's property line.

[Comment: See Section 265.17(a) for additional requirements.]

265.177 Special requirements for incompatible wastes.

(a) Incompatible wastes, or incompatible wastes and materials (see Appendix V for examples), must not be placed in the same container, unless Section 265.17(b) is complied with.
(b) Hazardous waste must not be placed in an unwashed container, that previously held an incompatible waste or material (see Appendix V for examples), unless Section 265.17(b) is complied with.

(c) A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials or protected from them by means of a dike, berm, wall, or other device.

[Comment: The purpose of this Section is to prevent fires, explosions, gaseous emissions, leaching, or other discharge of hazardous waste or hazardous waste constituents which could result from the mixing of incompatible wastes or materials if containers break or leak.]

265.178 Air emission standards.

The owner or operator shall manage all hazardous waste placed in a container in accordance with the applicable requirements of subparts AA, BB, and CC of this part.

(j) 40 CFR 265.190 through 265.202 (Subpart J), "Tank Systems", are incorporated by reference including subsequent amendments and editions.

SUBPART J - TANKS

265.190 Applicability.

The requirements of this subpart apply to owners and operators of facilities that use tank systems for storing or treating hazardous waste except as otherwise provided in paragraphs (a), (b), and (c) of this section or in 265.1 of this part.

(a) Tank systems that are used to store or treat hazardous waste which contains no free liquids and that are situated inside a building with an impermeable floor are exempted from the requirements of 265.193. To demonstrate the absence or presence of free liquids in the stored/treated waste, the following test must be used: Method 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" EPA Publication SW-846), as incorporated by reference in Section 260.11 of this chapter.

(b) Tank systems, including sumps, as defined in Section 260.10, that serve as part of a secondary containment system to collect or contain releases of hazardous wastes are exempted from the requirements in Section 265.193(a).

(c) Tanks, sumps, and other collection devices used in conjunction with drip pads, as defined in Section 260.10 of this chapter and regulated under 40 CFR part 265 subpart W, must meet the requirements of this subpart.

265.191 Assessment of existing tank system's integrity.

(a) For each existing tank system that does not have secondary containment meeting the requirements of 265.193, the owner or operator must determine that the tank system is not leaking or is unfit for use. Except as provided in paragraph (c) of this section, the owner or operator must obtain and keep on file at the facility a written assessment reviewed and certified by an independent, qualified, registered professional engineer in accordance with 270.11(d) that attests to the tank system's integrity by January 12, 1988.

(b) This assessment must determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be stored or treated to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment must consider the following:
  (1) Design standard(s) if available, according to which the tank and ancillary equipment were constructed;
  (2) Hazardous characteristics of the waste(s) that have been or will be handled;
  (3) Existing corrosion protection measures;
  (4) Documented age of the tank system, if available, (otherwise, an estimate of the age); and
  (5) Results of a leak test, internal inspection, or other tank integrity examination such that:
    (i) For non-enterable underground tanks, this assessment must consist of a leak test that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets, and high water table effects.
    (ii) For other than non-enterable underground tanks and for ancillary equipment, this assessment must be either a leak test, as described above, or an internal inspection and/or other tank integrity examination certified by an independent, qualified, registered professional engineer in accordance with 270.11(d) that addresses cracks, leaks, corrosion, and erosion.

[Note: The practices described in the American Petroleum Institute (API) Publication, Guide for Inspection of Refinery Equipment, Chapter XIII, "Atmospheric and Low-Pressure Storage Tanks," 4th edition, 1981, may be used, where applicable, as guidelines in conducting the integrity examination of an other than non-enterable underground tank system.]

(c) Tank systems that store or treat materials that become hazardous wastes subsequent to July 14, 1986 must conduct this assessment within 12 months after the date that the waste becomes a hazardous waste.

(d) If, as a result of the assessment conducted in accordance with paragraph (a) of this section, a tank system is found to be leaking or unfit for use, the owner or operator must comply with requirements of 265.196.

265.192 Design and installation of new tank systems or components.

(a) Owners or operators of new tank systems or components must ensure that the foundation, structural support, seams, connections, and pressure controls [if applicable] are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection so that it will not collapse, rupture, or fail. The owner or operator must obtain a written assessment reviewed and certified by an independent, qualified, registered professional engineer in accordance with 270.11(d) attesting that the system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. This assessment must include, at a minimum, the following information:
  (1) Design standard(s) according to which the tank(s) and ancillary equipment is or will be constructed.
  (2) Hazardous characteristics of the waste(s) to be handled.
  (3) For new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system is or or will be in contact with the soil or with water, a determination by a corrosion expert of:
    (i) Factors affecting the potential for corrosion, including but not limited to:
      (A) Soil moisture content;
      (B) Soil pH;
      (C) Soil sulfides level;
      (D) Soil resistivity;
      (E) Structure to soil potential;
      (F) Influence of nearby underground metal structures (e.g., piping);
      (G) Stray electric current;
      (H) Existing corrosion-protection measures (e.g., coating, cathodic protection), and
    (ii) The type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component, consisting of one or more of the following:
      (A) Corrosion-resistant materials of construction such as special alloys, fiberglass-reinforced plastic, etc:
      (B) Corrosion-resistant coating (such as epoxy, fiberglass, etc.) with cathodic protection (e.g., impressed current or sacrificial anodes); and
      (C) Electrical isolation devices such as insulating joints, flanges, etc.

[Note: The practices described in the National Association of Corrosion Engineers (NACE) standard, "Recommended Practice (RP-02-85)--Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and the American Petroleum Institute (API) Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems," may be used, where applicable, as guidelines in providing corrosion protection for tank systems.]

  (4) For underground tank system components that are likely to be affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage; and
  (5) Design considerations to ensure that:
    (i) Tank foundations will maintain the load of a full tank;
    (ii) Tank systems will be anchored to prevent flotation or dislodgement where the tank system is placed in a saturated zone, or is located within a seismic fault zone; and
    (iii) Tank systems will withstand the effects of frost heave.

(b) The owner or operator of a new tank system must ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or an independent, qualified, registered professional engineer, either of whom is trained and experienced in the proper installation of tank systems, must inspect the system or component for the presence of any of the following items:
  (1) Weld breaks;
  (2) Punctures;
  (3) Scrapes of protective coatings;
  (4) Cracks;
  (5) Corrosion;
  (6) Other structural damage or inadequate construction or installation.

  All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.

(c) New tank systems or components and piping that are placed underground and that are backfilled must be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is carefully installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.

(d) All new tanks and ancillary equipment must be tested equipment must be tested for tightness prior to being covered, enclosed or placed in use. If a tank system is found not to be tight, all repairs necessary to remedy the leak(s) in the system must be performed prior to the tank system being covered, enclosed, or placed in use.

(e) Ancillary equipment must be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion or contraction.

[Note: The piping system installation procedures described in American Petroleum Institute (API) Publication 1615 (November 1979), Installation of Underground Petroleum Storage Systems," or ANSI Standard B31.3, "Petroleum Refinery System," may be used, where applicable, as guidelines for proper installation of piping systems.]

(f) The owner or operator must provide the type and degree of corrosion protection necessary, based on the information provided under paragraph (a)(3) of this section, to ensure the integrity of the tank system during use of the tank system. The installation of a corrosion protection system that is field fabricated must be supervised by an independent corrosion expert to ensure proper installation.

(g) The owner or operator must obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of paragraphs (b) through (f) of this section to attest that the tank system was properly designed and installed and that repairs, pursuant to paragraphs (b) and (d) of this section were performed. These written statements must also include the certification statement as required in 270.11(d) of this chapter.

265.193 Containment and detection of releases.

(a) In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this section must be provided [except as provided in paragraphs (f) and (g) of this section]:
  (1) For all new tank systems or components, prior to their being put into service;
  (2) For all existing tanks used to store or treat EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027, within two years after January 12, 1987;
  (3) For those existing tank systems of known and documentable age, within two years after January 12, 1987, or when the tank systems have reached 15 years of age, whichever comes later;
  (4) For those existing tank system for which the age cannot be documented, within eight years of January 12, 1987; but if the age of the facility age is greater than seven years, secondary containment must be provided by the time the facility reaches 15 years of age, or within two years of January 12, 1987, whichever comes later; and
  (5) For tank systems that store or treat materials that become hazardous wastes subsequent to January 12, 1987, within the time intervals required in paragraphs (a)(1) through (a)(4) of this section, except that the date that a material becomes a hazardous waste must be used in place of January 12, 1987.

(b) Secondary containment systems must be:
  (1) Designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and
  (2) Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

(c) To meet the requirements of paragraph (b) of this section, secondary containment systems must be at a minimum:
  (1) Constructed of or lined with materials that are compatible with the waste(s) to be placed in the tank system and must have sufficient strength and thickness to prevent failure due to pressure gradients [including static head and external hydrological forces], physical contact with the waste to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation [including stresses from nearby vehicular traffic]:
  (2) Placed on a foundation or base capable of providing support to the secondary containment system and resistance to pressure gradients above and below the system and capable of preventing failure due to settlement, compression, or uplift:
  (3) Provided with a leak detection system that is designed and operated so that it will detect the failure of either the primary and secondary containment structure or any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours, or at the earliest practicable time if the existing detection technology or site conditions will not allow detection of a release within 24 hours:
  (4) Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human

health or the environment, if removal of the released waste or accumulated precipitation cannot be accomplished within 24 hours.

[Note: If the collected material is a hazardous waste under Part 261 of this chapter, it is subject to management as a hazardous waste in accordance with all applicable requirements of Parts 262 through 265 of this chapter. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of sections 301, 304 and 402 of the Clean Water Act, as amended. If discharged to Publicly Owned Treatment works (POTW's), it is subject to the requirements of section 307 of the Clean Water Act, as amended. If the collected material is released to the environment, it may be subject to the reporting requirements of 40 CFR, Part 302.]

(d) Secondary containment for tanks must include one or more of the following devices:
  (1) A liner (external to the tank):
  (2) A vault:
  (3) A double-walled tank; or
  (4) An equivalent device as approved by the Regional Administrator.

(e) In addition to the requirements of paragraphs (b), (c), and (d) of this section, secondary containment systems must satisfy the following requirements:
  (1) External liner systems must be:
    (i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;
    (ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25-year, 24-hour rainfall event:
    (iii) Free of cracks or gaps; and
    (iv) Designed and installed to completely surround the tank and to cover all surrounding earth likely to come into contact with the waste if released from the tank(s) [i.e., capable of preventing lateral as well as vertical migration of the waste].
  (2) Vault systems must be:
    (i) Designed or operated to contain 100 percent of the capacity of the largest tank within its boundary:
    (ii) Designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25-year, 24-hour rainfall event:
    (iii) Constructed with chemical-resistant water stops in place at all joints [if any]:
    (iv) Provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete:
    (v) Provided with a means to protect against the formation of and ignition of vapors within the vault, if the waste being stored or treated:
      (A) Meets the definition of ignitable waste under 262.21 of this chapter, or
      (B) Meets the definition of reactive waste under 262.21 of this chapter and may form an ignitable or explosive vapor; and
    (vi) Provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.
  (3) Double-walled tanks must be:
    (i) Designed as an integral structure [i.e., an inner tank within an outer shell] so that any release from the inner tank is contained by the outer shell;
    (ii) Protected, if constructed of metal, from both corrosion of the primary tank interior and the external surface of the outer shell; and
    (iii) Provided with a built-in, continuous leak detection system capable of detecting a release within 24 hours or at the earliest practicable time, if the owner or operator can demonstrate to the Regional Administrator, and the Regional Administrator concurs, that the existing leak detection technology or site conditions will not allow detection of a release within 24 hours.

[Note: The provisions outlined in the Steel Tank Institute's (STI) "Standard for Dual Wall Underground Steel Storage Tank" may be used as guidelines for aspects of the design of underground steel double-walled tanks.]

(f) Ancillary equipment must be provided with full secondary containment [e.g., trench, jacketing, double-walled piping] that meets the requirements of paragraphs (b) and (c) of this section except for:
  (1) Aboveground piping [exclusive of flanges, joints, valves, and connections] that are visually inspected for leaks on a daily basis:

(2) Welded flanges, welded joints, and welded connections that are visually inspected for leaks on a daily basis:

(3) Sealless or magnetic coupling pumps and sealless valves, that are visually inspected for leaks on a daily basis; and

(4) Pressurized aboveground piping systems with automatic shut-off devices [e.g., excess flow check valves, flow metering shutdown devices, loss of pressure actuated shut-off devices] that are visually inspected for leaks on a daily basis.

(g) The owner or operator may obtain a variance from the requirements of this section if the Regional Administrator finds, as a result of a demonstration by the owner or operator, either: that alternative design and operating practices, together with location characteristics, will prevent the migration of hazardous waste or hazardous constituents into the ground water or surface water at least as effectively as secondary containment during the active life of the tank system or that in the event of a release that does migrate to ground water or surface water, no substantial present or potential hazard will be posed to human health or the environment. New underground tank systems may not, per a demonstration in accordance with paragraph (g)(2) of this section, be exempted from the secondary containment requirements of this section. Application for a variance as allowed in paragraph (g) of this section does not waive compliance with the requirements of this Subpart for new tank systems.

(1) In deciding whether to grant a variance based on a demonstration of equivalent protection of ground water and surface water, the Regional Administrator will consider:

(i) The nature and quantity of the waste:

(ii) The proposed alternate design and operation:

(iii) The hydrogeologic setting of the facility, including the thickness of soils between the tank system and ground water; and

(iv) All other factors that would influence the quality and mobility of the hazardous constituents and the potential for them to migrate to ground water or surface water.

(2) In deciding whether to grant a variance, based on a demonstration of no substantial present or potential hazard, the Regional Administrator will consider:

(i) The potential adverse effects on ground water, surface water, and land quality taking account:

(A) The physical and chemical characteristics of the waste in the tank system, including its potential for migration,

(B) The hydrogeological characteristics of the facility and surrounding land,

(C) The potential for health risks caused by human exposure to waste constituents,

(D) The potential for damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents, and

(E) The persistence and permanence of the potential adverse effects;

(ii) The potential adverse effects of a release on ground-water quality, taking into account:

(A) The quantity and quality of ground water and the direction of ground-water flow.

(B) The proximity and withdrawal rates of water in the area,

(C) The current and future uses of ground water in the area, and

(D) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground-water quality;

(iii) The potential adverse effects of a release on surface water quality, taking into account:

(A) The quantity and quality of ground water and the direction of ground-water flow.

(B) The patterns of rainfall in the region.

(C) The proximity of the tank system to surface waters.

(D) The current and future uses of surface waters in the area and any water quality standards established for those surface waters, and

(E) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface-water quality; and

(iv) The potential adverse effects of a release on the land surrounding the tank system, taking into account.

(A) The patterns of rainfall in the region, and

(B) The current and future uses of the surrounding land.

(3) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with the requirements of paragraph (g)(1) of this section, at which a release of hazardous waste has occurred from the primary tank system but has not migrated beyond the zone of engineering control [as established in the variance], must:

(i) Comply with the requirements of 265.196, except paragraph (d); and

(ii) Decontaminate or remove contaminated soil to the extent necessary to:

(A) Enable the tank system, for which the variance was granted, to resume operation with the capability for the detection of and response to releases at least equivalent to the capability it had prior to the release, and

(B) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water; and

(iii) If contaminated soil cannot be removed or decontaminated in accordance with paragraph (g)(3)(ii) of this section, comply with the requirements of 265.197(b):

(4) The owner or operator of a tank system, for which a variance from secondary containment had been granted in accordance with the requirements of paragraph (g)(1) of this section, at which a release of hazardous waste has occurred from the primary tank system and has migrated beyond the zone of engineering control [as established in the variance], must:

(i) Comply with the requirements of 265.196(a), (b), (c), and (d); and

(ii) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water, if possible, and decontaminate or remove contaminated soil. If contaminated soil cannot be decontaminated or removed, or if ground water has been contaminated, the owner or operator must comply with the requirements of 265.197(b):

(iii) If repairing, replacing, or reinstalling the tank system, provide secondary containment in accordance with the requirements of paragraphs (a) through (f) of this section or reapply for a variance from secondary containment and meet the requirements for new tank systems in 265.192 if the tank system is replaced. The owner or operator must comply with these requirements even if contaminated soil can be decontaminated or removed, and ground water or surface water has not been contaminated.

(h) The following procedures must be followed in order to request a variance from secondary containment:

(1) The Regional Administrator must be notified in writing by the owner or operator that he intends to conduct and submit a demonstration for a variance from secondary containment as allowed in paragraph (g) of this section according to the following schedule.

(i) For existing tank systems, at least 24 months prior to the date that secondary containment must be provided in accordance with paragraph (a) of this section; and

(ii) For new tank systems, at least 30 days prior to entering into a contract for installation of the tank system.

(2) As part of the notification, the owner or operator must also submit to the Regional Administrator a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. The demonstration must address each of the factors listed in paragraph (g)(1) or paragraph (g)(2) of this section.

(3) The demonstration for a variance must be completed and submitted to the Regional Administrator within 180 days after notifying the Regional Administrator of intent to conduct the demonstration.

(4) The Regional Administrator will inform the public, through a newspaper notice of the availability of the demonstration for a variance. The notice shall be placed in a daily or weekly major local newspaper of general circulation and shall provide at least 30 days from the date of the notice for the public to review and comment on the demonstration for a variance. The Regional Administrator also will hold a public hearing, in response to a request or at his own discretion, whenever such a hearing might clarify one or more issues concerning the demonstration for a variance. Public notice of the hearing will be given at least 30 days prior to the date of the hearing and may be given at the same time as notice of the opportunity for the public to review and comment on the demonstration. These two notices may be combined.

(5) The Regional Administrator will approve or disapprove the request for a variance within 90 days of receipt of the demonstration from the owner or operator and will notify in writing the owner or operator and each person who submitted written comments or requested notice of the variance decision. If the demonstration for a variance is incomplete or does not include sufficient information, the 90-day time period will begin when the Regional Administrator receives a complete demonstration, including all information necessary to make a final determination. If the public comment period in paragraph (h)-(4) of this section is extended, the 90-day time period will be similarly extended.

(i) All tank systems, until such time as secondary containment meeting the requirements of this section is provided, must comply with the following:

(A) For non-enterable underground tanks, a leak test that meets the requirements of 265.191(b)(5) must be conducted at least annually;

(B) or other than non-enterable underground tanks and for all ancillary equipment, an annual leak test, as described in paragraph (i)(1) of this section, or an internal inspection or other tank integrity examination by an independent, qualified, registered professional engineer that addresses cracks, leaks, corrosion, and erosion must be conducted at least annually. The owner or operator must remove the stored waste from the tank, if necessary, to allow the condition of all internal tank surfaces to be assessed.

[Note: The practices described in the American Petroleum Institute (API) Publication Guide for Inspection of Refining Equipment; Chapter XIII, "Atmospheric and Low Pressure Storage Tanks," 4th edition, 1981, may be used, when applicable, as guidelines for assessing the overall condition of the tank system.]

(C) The owner or operator must maintain on file at the facility a record of the results of the assessments conducted in accordance with paragraph (i)-(1) through (i)(3) of this section.

(D) If a tank system or component is found to be leaking or unfit-for-use as a result of the leak test or assessment in paragraphs (i)(1) through (i)(3) of this section, the owner or operator must comply with the requirements of 265.196.

265.194 General Operating Requirements.

(a) Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the secondary containment system to rupture, leak, corrode, or otherwise fail.

(b) The owner or operator must use appropriate controls and practices to prevent spills and overflows from tank or secondary containment systems. These include at a minimum:
  (1) Spill prevention controls (e.g., check valves, dry discount couplings);
  (2) Overfill prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank); and
  (3) Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

(c) The owner or operator must comply with the requirements of Section 265.196 if a leak or spill occurs in the tank system.

265.195 Inspections.

(a) The owner or operator must inspect, where present, at least once each operating day:
  (1) Overfill/spill control equipment [e.g., waste-feed cutoff systems, bypass systems, and drainage systems] to ensure that it is in good working order:
  (2) The aboveground portions of the tank system, if any, to detect corrosion or releases of waste:
  (3) Data gathered from monitoring equipment and leak-detection equipment, [e.g., pressure and temperature gauges, monitoring wells] to ensure that the tank system is being operated according to its design; and
  (4) The construction materials and the area immediately surrounding the externally accessible portion of the tank system including secondary containment structures [e.g., dikes] to detect erosion or signs of releases of hazardous waste [e. g., wet spots, dead vegetation]:

[Note: 265.15(c) requires the owner or operator to remedy any deterioration or malfunction he finds. 265.196 requires the owner or operator to notify the Regional Administrator within 24 hours of confirming a release. Also, 40 CFR Part 302 may require the owner or operator to notify the National Response Center of a release.]

(b) The owner or operator must inspect cathodic protection systems, if present, according to, at a minimum, the following schedule to ensure that they are functioning properly:
  (1) The proper operation of the cathodic protection system must be confirmed within six months after initial installation, and annually thereafter; and
  (2) All sources of impressed current must be inspected and/or tested, as appropriate, at least bimonthly [i.e., every other month].

[Note: The practices described in the National Association of Corrosion Engineers (NACE) standard, "Recommended Practice (RP-02-85)--Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and the American Petroleum Institute (API) Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems," may be used, where applicable, as guidelines in maintaining and inspecting cathodic protection systems.]

(c) The owner or operator must document in the operating record of the facility an inspection of those items in paragraphs (a) and (b) of this section.

265.196 Response to leaks or spills and disposition of leaking or unfit-for-use tank systems.

A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately, and the owner or operator must satisfy the following requirements:

(a) Cessation of use; prevent flow or addition of wastes. The owner or operator must immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

(b) Removal of waste from tank system or secondary containment system.
  (1) If the release was from the tank system, the owner or operator must, within 24 hours after detection of the leak or, if the owner or operator demonstrates that that is not possible, at the earliest practicable time remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.
  (2) If the release was to a secondary containment system, all released materials must be removed within 24 hours or in as timely a manner as is possible to prevent harm to human health and the environment.

(c) Containment of visible releases to the environment. The owner or operator must immediately conduct a visual inspection of the release and, based upon that inspection:
  (1) Prevent further migration of the leak or spill to soils or surface water; and
  (2) Remove, and properly dispose of, any visible contamination of the soil or surface water.

(d) Notifications, reports.
  (1) Any release to the environment, except as provided in paragraph (d)(2) of this section, must be reported to the Regional Administrator within 24 hours of detection. If the release has been reported pursuant to 40 CFR Par 302, that report will satisfy this requirement.
  (2) A leak or spill of hazardous waste that is:
    (i) Less than or equal to a quantity of one (1) pound, and
    (ii) Immediately contained and cleaned-up is exempted from the requirements of this paragraph.
  (3) Within 30 days of detection of a release to the environment, a report containing the following information must be submitted to the Regional Administrator:
    (i) Likely route of migration of the release:
    (ii) Characteristics of the surrounding soil [soil composition, geology, hydrogeology, climate]:
    (iii) Results of any monitoring or sampling conducted in connection with the release, [if available[. If sampling or monitoring data relating to the release are not available within 30 days, these data must be submitted to the Regional Administrator as soon as they become available:
    (iv) Proximity to downgradient drinking water, surface water, and population areas; and
    (v) Description of response actions taken or planned.

(e) Provision of secondary containment, repair, or closure.
  (1) Unless the owner or operator satisfies the requirements of paragraphs (e)(2) through (4) of this section, the tank system must be closed in accordance with 265.197.
  (2) If the cause of the release was a spill that has not damaged the integrity of the system, the owner/operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.
  (3) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired prior to returning the tank system to service.
  (4) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the owner/operator must provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of 265.193 before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of paragraph (f) of this section are satisfied. If a component is replaced to comply with the requirements of this subparagraph, that component must satisfy the requirements for new tank systems or components in 265.192 and 265.193. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection [e.g., the bottom of an inground or onground tank], the entire component must be provided with secondary containment in accordance with 265.193 prior to being returned to use.

(f) Certification of major repairs. If the owner or operator has repaired a tank system in accordance with paragraph (e) of this section, and the repair has been extensive [e.g., installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel], the tank system must not be returned to service unless the owner/operator has obtained a certification by an independent, qualified, registered professional engineer in accordance with 270.11(d) that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification must be submitted to the Regional Administrator within seven days after returning the tank system to use.

Note: The Regional Administrator may, on the basis of any information received that there is or has been a release of hazardous waste or hazardous constituents into the environment, issue an order under RCRA section 3004(v), 3008(h), or 7003(a) requiring corrective action or such other response as deemed necessary to protect human health or the environment.

[Note: See 265.15(c) for the requirements necessary to remedy a failure. Also, 40 CFR Part 302 requires the owner or operator to notify the National Response Center of a release of any "reportable quantity."]

265.197 Closure and post-closure care.

(a) At closure of a tank system, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components [liners, etc.,] contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste, unless 261.3(d) of this Chapter applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all of the requirements specified in Subparts G and H of this Part.

(b) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in paragraph (a) of this section, then the owner or operator must close the tank systems and perform post-closure care in accordance with closure and post-closure care requirements that apply to landfills [265.310] in addition, for the purposes of closures, post-closure, and financial responsibility, such a tank system is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in Subparts G and H of this Part.

(c) If an owner or operator has a tank system which does not have secondary containment that meets the requirements of 265.193(b) through (f) and which is not exempt from the secondary containment requirements in accordance with 265.193(g), then,
   (1) The closure plan for the tank system must include both a plan for complying with paragraph (a) of this section and a contingent plan for complying with paragraph (b) of this section.
   (2) A contingent post-closure plan for complying with paragraph (b) of this section must be prepared and submitted as part of the permit application.
   (3) The cost estimates calculated for closure and post-closure care must reflect the costs of complying with the contingent closure plan and the contingent post-closure plan, if these costs are greater than the costs of complying with the closure plan prepared for the expected closure under paragraph (a) of this section.
   (4) Financial assurance must be based on the cost estimates in paragraph (c)(3) of this section.
   (5) For the purposes of the contingent closure and post-closure plans, such a tank system is considered to be a landfill, and the contingent plans must meet all of the closure, post-closure, and financial responsibility requirements for landfills under Subparts G and H of this Part.

265.198 Special requirements for ignitable or reactive wastes.

(a) Ignitable or reactive waste must not be placed in a tank system, unless:
   (1) The waste is treated, rendered, or mixed before or immediately after placement in the tank system so that:
      (i) The resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive waste under 261.21 or 261.23 of this Chapter, and
      (ii) 265.17(b) is complied with; or
   (2) The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or
   (3) The tank system is used solely for emergencies.

(b) The owner or operator of a facility where ignitable or reactive waste is stored or treated in tanks must comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code," (1977 or 1981), (incorporated by reference, see 260.11).

265.199 Special requirements for incompatible wastes.

(a) Incompatible wastes, or incompatible waste and materials, must not be placed in the same tank system, unless 265.17(b) is complied with.

(b) Hazardous waste must not be placed in a tank system that has not been decontaminated and that previously held an incompatible waste or material, unless 265.17(b) is complied with.

265.200 Waste analysis and trial tests.

In addition to performing the waste analysis required by 265.13, the owner of operator must, whenever a tank system is to be used to treat chemically or to store a hazardous waste that is substantially different from waste previously treated or stored in that tank system; or treat chemically a hazardous waste with a substantially different process than any previously used in that tank system.

(a) Conduct waste analyses and trial treatment or storage tests [e.g., bench-scale or pilot-plant scale tests]; or
(b) Obtain written, documented information on similar waste under similar operating conditions to show that the proposed treatment or storage will meet the requirements of 265.194(a).

[Note: 265.13 requires the waste analysis plan to include analyses needed to comply with 265.198 and 265.199. 265.73 requires the owner or operator to place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility.]

265.201 Special requirements for generators of between 100 and 1,000 kg/mo that accumulate hazardous waste in tanks.

(a) The requirements of this section apply to small quantity generators of more than 100 kg but less than 1,000 kg of hazardous waste in a calendar month, that accumulate hazardous waste in tanks for less than 180 days [or 270 days if the generator must ship the waste greater than 200 miles], and do not accumulate over 6,000 kg on-site at any time.
(b) Generators of between 100 and 1,000 kg/mo hazardous waste must comply with the following general operating requirements:
    (1) Treatment or storage of hazardous waste in tanks must comply with 265.17(b).
    (2) Hazardous wastes or treatment reagents must not be placed in a tank if they could cause the tank or its inner liner to rupture, leak, corrode, or otherwise fail before the end of its intended life.
    (3) Uncovered tanks must be operated to ensure at least 60 centimeters [2 feet] of freeboard, unless the tank is equipped with a containment structure [e.g., dike or trench], a drainage control system, or a diversion structure [e.g,, standby tank] with a capacity that equals or exceeds the volume of the top 60 centimeters [2 feet] of the tank.
    (4) Where hazardous waste is continuously fed into a tank, the tank must be equipped with a means to stop this inflow [e.g., waste feed cutoff system or by-pass system to a stand-by tank].

[Note: These systems are intended to be used in the event of a leak or overflow from the tank due to a system failure (e.g., a malfunction in the treatment process, a crack in the tank, etc.,).]

(c) Generators of between 100 and 1,000 kg/mo accumulating hazardous waste in tanks must inspect, where present:
    (1) Discharge control equipment [e.g., waste feed cutoff systems, by-pass systems, and drainage systems] at least once each operating day, to ensure that it is in good working order:
    (2) Data gathered from monitoring equipment [e.g., pressure and temperature gauges] at least once each operating day to ensure that the tank is being operated according to its design:
    (3) The level of waste in the tank at least once each operating day to ensure compliance with 265.201(b)(3):
    (4) The construction materials of the tank at least weekly to detect corrosion or leaking of fixtures or seams; and
    (5) The Construction materials of, and the area immediately surrounding discharge confinement structures [e.g., dikes] at least weekly to detect erosion or obvious signs of leakage [e.g., wet spots or dead vegetation].

[Note: As required by 265.15(c), the owner or operator must remedy any deterioration or malfunction he finds.]

(d) Generators of between 100 and 1,000 kg/mo accumulating hazardous waste in tanks must, upon closure of the facility, remove all hazardous waste from tanks, discharge control equipment, and discharge confinement structures.

[Note: At closure, as throughout the operating period, unless the owner or operator can demonstrate, in accordance with 261.3(c) or (d) of this chapter, that any solid waste removed from his tank is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of Parts 262, 263, and 265 of this chapter.]

(e) Generators of between 100 and 1,000 kg/mo must comply with the following special requirements for ignitable or reactive waste:
  (1) Ignitable or reactive waste must not be placed in a tank, unless:
    (i) The waste is treated, rendered, or mixed before or immediately after placement in a tank so that (A) the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under 261.21 or 261.23 of this Chapter, and (b) 265.17(b) is complied with; or
    (ii) The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react; or
    (iii) The tank is used solely for emergencies.
  (2) The owner or operator of a facility which treats or stores ignitable or reactive waste in covered tanks must comply with the buffer zone requirements for tanks contained in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code," [1977 or 1981] [incorporated by reference, see 260.11].

(f) Generators of between 100 and 1,000 kg/mo must comply with the following special requirements for incompatible wastes:
  (1) Incompatible wastes, or incompatible wastes and materials, [see Appendix V for examples] must not be placed in the same tank, unless 265.17(b) is complied with
  (2) Hazardous waste must not be placed in an unwashed tank which previously held an incompatible waste or material, unless Section 265.17(b) is complied with.

265.202 Air emission standards.

The owner or operator shall manage all hazardous waste placed in a tank in accordance with the applicable requirements of subparts AA, BB, and CC of this part.

(k) 40 CFR 265.220 through 265.231 (Subpart K), "Surface Impoundments", are incorporated by reference including subsequent amendments and editions.

SUBPART K - SURFACE IMPOUNDMENTS

265.220 Applicability.

The regulations in this subpart apply to owners and operators of facilities that use surface impoundments to treat, store, or dispose of hazardous waste, except as Section 265.1 provides otherwise.

265.221 Design and Operating Requirements.

(a) The owner or operator of each new surface impoundment unit on which construction commences after January 29, 1992, each lateral expansion of a surface impoundment unit on which construction commences after July 29, 1992, and each replacement of an existing surface impoundment unit that is to commence reuse after July 29, 1992 must install two or more liners and a leachate collection and removal system between such liners, and operate the leachate collection and removal system, in accordance with Section 264.221(c), unless exempted under Section 264.221(d), (e), or (f), of this chapter. "Construction commences" is as defined in Section 260.10 of this chapter under "existing facility."

(b) The owner or operator of each unit referred to in paragraph (a) of this section must notify the Regional Administrator at least sixty days prior to receiving waste. The owner or operator of each facility submitting notice must file a Part B application within six months of the receipt of such notice.

(c) The owner or operator of any replacement surface impoundment unit is exempt from paragraph (a) of this section if:

(1) The existing unit was constructed in compliance with the design standards of Section 3004(o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act; and

(2) There is no reason to believe that the liner is not functioning as designed.

(d) The double liner requirement set forth in paragraph (a) of this section may be waived by the Regional Administrator for any monofill, if:

(1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the Toxicity Characteristic in Section 261.24 of this chapter, with EPA Hazardous Waste Numbers D004 through D017; and

(2) (i) (A) The monofill has at least one liner for which there is no evidence that such liner is leaking. For the purposes of this paragraph the term "liner" means a liner designed, constructed, installed, and operated to prevent hazardous waste from passing into the liner at any time during the active life of the facility, or a liner designed, constructed, installed, and operated to prevent hazardous waste from migrating beyond the liner to adjacent subsurface soil, ground water, or surface water at any time during the active life of the facility. In the case of any surface impoundment which has been exempted from the requirements of paragraph (a) of this section on the basis of a liner designed, constructed, installed, and operated to prevent hazardous waste from passing beyond the liner, at the closure of such impoundment the owner or operator must remove or decontaminate all waste residues, all contaminated liner material, and contaminated soil to the extent practicable. If all contaminated soil is not removed or decontaminated, the owner or operator of such impoundment must comply with appropriate post-closure requirements, including but not limited to groundwater monitoring and corrective action;

(B) The monofill is located more than one-quarter mile from an underground source of drinking water (as that term is defined in Section 144.3 of this chapter); and

(C) The monofill is in compliance with generally applicable groundwater monitoring requirements for facilities with permits under RCRA Section 3005(c); or

(ii) The owner or operator demonstrates that the monofill is located, designed, and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

(e) In the case of any unit in which the liner and leachate collection system has been installed pursuant to the requirements of paragraph (a) of this section and in good faith compliance with paragraph (a) of this section and with guidance documents governing liners and leachate collection systems under paragraph (a) of this section, no

liner or leachate collection system which is different from that which was so installed pursuant to paragraph (a) of this section will be required for such unit by the Regional Administrator when issuing the first permit to such facility, except that the Regional Administrator will not be precluded from requiring installation of a new liner when the Regional Administrator has reason to believe that any liner installed pursuant to the requirements of paragraph (a) of this section is leaking.

(f) A surface impoundment must maintain enough freeboard to prevent any overtopping of the dike by overfilling, wave action, or a storm. Except as provided in paragraph (b) of this section, there must be at least 60 centimeters (two feet) of freeboard.

(g) A freeboard level less than 60 centimeters (two feet) may be maintained if the owner or operator obtains certification by a qualified engineer that alternate design features or operating plans will, to the best of his knowledge and opinion, prevent overtopping of the dike. The certification, along with a written identification of alternate design features or operating plans preventing overtopping, must be maintained at the facility.

(h) Surface impoundments that are newly subject to RCRA section 3005(j)(1) due to the promulgation of additional listings or characteristics for the identification of hazardous waste must be in compliance with paragraphs (a), (c) and (d) of this section not later than 48 months after the promulgation of the additional listing or characteristic. This compliance period shall not be cut short as the result of the promulgation of land disposal prohibitions under part 266 of this chapter or the granting of an extension to the effective date of a prohibition pursuant to Section 268.5 of this chapter, within this 48-month period.

265.222 Action Leakage Rate.

(a) The owner or operator of surface impoundment units subject to Section 265.221(a) must submit a proposed action leakage rate to the Regional Administrator when submitting the notice required under Section 265.221(b). Within 60 days of receipt of the notification, the Regional Administrator will: Establish an action leakage rate, either as proposed by the owner or operator or modified using the criteria in this section; or extend the review period for up to 30 days. If no action is taken by the Regional Administrator before the original 60 or extended 90 day review periods, the action leakage rate will be approved as proposed by the owner or operator.

(b) The Regional Administrator shall approve an action leakage rate for surface impoundment units subject to Section 265.221(a). The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

(c) To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly or monthly flow rate from the monitoring data obtained under Section 265.226(b), to an average daily flow rate (gallons per acre per day) for each sump. Unless the Regional Administrator approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period, and if the unit closes in accordance with Section 265.228(a)(2), monthly during the post-closure care period when monthly monitoring is required under Section 265.226(b).

265.223 Containment system.

All earthen dikes must have a protective cover, such as grass, shale, or rock, to minimize wind and water erosion and to preserve their structural integrity.

265.223 Response Actions.

(a) The owner or operator of surface impoundment units subject to Section 265.221(a) must submit a response action plan to the Regional Administrator when submitting the proposed action leakage rate under Section 265.222. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in paragraph (b) of this section.

(b) If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:

(1) Notify the Regional Administrator in writing of the exceedence within seven days of the determination;

(2) Submit a preliminary written assessment to the Regional Administrator within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;

(3) Determine to the extent practicable the location, size, and cause of any leak;
(4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;
(5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and
(6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Regional Administrator the results of the analyses specified in paragraphs (b)(3), (4), and (5) of this section, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the Regional Administrator a report summarizing the results of any remedial actions taken and actions planned.

(c) To make the leak and/or remediation determinations in paragraphs (b)(3), (4), and (5) of this section, the owner or operator must:
(1) (i) Assess the source of liquids and amounts of liquids by source,
(ii) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and
(iii) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or
(2) Document why such assessments are not needed.

265.224 [Reserved]

265.225 Waste analysis and trial tests.

(a) In addition to the waste analyses required by Section 265.13, whenever a surface impoundment is to be used to:

(1) Chemically treat a hazardous waste which is substantially different from a waste previously treated in that impoundment; or
(2) Chemically treat hazardous waste with a substantially different process than any previously used in that impoundment; the owner or operator must, before treating the different waste or using the different process:
(i) Conduct waste analyses and trial treatment tests (e.g., bench scale or pilot plant scale tests); or
(ii) Obtain written, documented information on similar treatment of similar waste under similar operating conditions to show that this treatment will comply with Section 265.17(b).

[Comment: As required by Section 265.13, the waste analysis plan must include analyses needed to comply with Sections 265.229 and 265.230. As required by Section 265.73, the owner or operator must place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility.]

265.226 Monitoring and Inspections.

(a) The owner or operator must inspect:

(1) The freeboard level at least once each operating day to ensure compliance with Section 265.222; and
(2) The surface impoundment, including dikes and vegetation surrounding the dike, at least once a week to detect any leaks, deterioration, or failures in the impoundment.

(b) (1) An owner or operator required to have a leak detection system under Section 265.221(a) must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.
(2) After the final cover is installed, the amount of liquids removed from each leak detection system sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semi-annually. If at any time during the post-closure care period the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator must return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.
(3) Pump operating level" is a liquid level proposed by the owner or operator and approved by the Regional Administrator based on pump activation level, sump dimensions, and level that avoids backup into the

drainage layer and minimizes head in the sump. The timing for submission and approval of the proposed "pump operating level" will be in accordance with Section 265.222(a).

[Comment: As required by Section 265.15(c), the owner or operator must remedy any deterioration or malfunction he finds.]

265.227 [Reserved]

265.228 Closure and post-closure Care.

(a) At closure, the owner or operator must:
  (1) Remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless Section 261.3(d) of this chapter applies; or
  (2) Close the impoundment and provide post-closure care for a landfill under Subpart G and Section 265.310, including the following:
    (i) Eliminate free liquids by removing liquid wastes or solidifying the remaining wastes and waste residues;
    (ii) Stabilize remaining wastes to a bearing capacity sufficient to support the final cover; and
    (iii) Cover the surface impoundment with a final cover designed and constructed to:
      (A) Provide long-term minimization of the migration of liquids through the closed impoundment;
      (B) Function with minimum maintenance;
      (C) Promote drainage and minimize erosion or abrasion of the cover;
      (D) Accommodate settling and subsidence so that the cover's integrity is maintained; and
      (E) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

(b) In addition to the requirements of Subpart G and Section 265.310 during the post-closure care period, the owner or operator of a surface impoundment in which wastes, waste residues, or contaminated materials remain after closure in accordance with the provisions of paragraph (a)(2) of this section must:
  (1) Maintain the integrity and effectiveness of the final cover, including making repairs to the cover as necessary to correct the effects of settling, subsidence, erosion, or other events;
  (2) Maintain and monitor the leak detection system in accordance with Sections 265.221(c)(2)(iv) and (3) of this chapter and 265.226(b) and comply with all other applicable leak detection system requirements of this part;
  (3) Prevent run-on and run-off from eroding or otherwise damaging the final cover.

265.229 Special requirements for ignitable or reactive waste.

Ignitable or reactive waste must not be placed in a surface impoundment, unless the waste and impoundment satisfy all applicable requirements of 40 CFR part 268, and:

(a) The waste is treated, rendered, or mixed before or immediately after placement in the impoundment so that:
  (1) the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under Sections 261.21 or 261.23 of this chapter; and
  (2) Section 265.17(b) is complied with; or

(b) (1) 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; and
  (2) The owner or operator obtains a certification from a qualified chemist or engineer that, to the best of his knowledge and opinion, the design features or operating plans of the facility will prevent ignition or reaction; and
  (3) The certification and the basis for it are maintained at the facility; or

(c) The surface impoundment is used solely for emergencies.

265.230 Special requirements for incompatible wastes.

Incompatible wastes, or incompatible wastes and materials, (see Appendix V for examples) must not be placed in the same surface impoundment, unless Section 265.17(b) is complied with.

265.231 Air emission standards.

The owner or operator shall manage all hazardous waste placed in a surface impoundment in accordance with the applicable requirements of subparts BB and CC of this part.

(l) 40 CFR 265.250 through 265.260 (Subpart L), "Waste Piles", are incorporated by reference including subsequent amendments and editions.

SUBPART L - WASTE PILES

265.250 Applicability.

The regulations in this subpart apply to owners and operators of facilities that treat or store hazardous waste in piles, except as Section 265.1 provides otherwise. Alternatively, a pile of hazardous waste may be managed as a landfill under Subpart N.

265.251 Protection from wind.

The owner or operator of a pile containing hazardous waste which could be subject to dispersal by wind must cover or otherwise manage the pile so that wind dispersal is controlled.

265.252 Waste analysis.

In addition to the waste analyses required by Section 265.13, the owner or operator must analyze a representative sample of waste from each incoming movement before adding the waste to any existing pile, *unless*:

(1) the only wastes the facility receives which are amenable to piling are compatible with each other; or

(2) the waste received is compatible with the waste in the pile to which it is to be added. The analysis conducted must be capable of differentiating between the types of hazardous waste the owner or operator places in piles, so that mixing of incompatible waste does not inadvertently occur. The analysis must include a visual comparison of color and texture.

[Comment: As required by Section 265.13, the waste analysis plan must include analyses needed to comply with Sections 265.256 and 265.257. As required by Section 265.73, the owner or operator must place the results of this analysis in the operating record of the facility.]

265.253 Containment.

If leachate or run-off from a pile is a hazardous waste, then either:

(a) (1) The pile must be placed on an impermeable base that is compatible with the waste under the conditions of treatment or storage;

(2) The owner or 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 or operator must design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm; and

(4) Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously to maintain design capacity of the system; or

(b) (1) 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.

[Comment: If collected leachate or run-off is discharged through a point source to waters of the United States, it is subject to the requirements of Section 402 of the Clean Water Act, as amended.]

265.254 Design and Operating Requirements.

The owner or operator of each new waste pile on which construction commences after January 29, 1992, each lateral expansion of a waste pile unit on which construction commences after July 29, 1992, and each such replacement of an existing waste pile unit that is to commence reuse after July 29, 1992 must install two or more liners and a leachate collection and removal system above and between such liners, and operate the leachate collection and removal systems,

in accordance with Section 264.251(c), unless exempted under Section 264.251(d), (e), or (f), of this chapter; and must comply with the procedures of Section 265.221(b). "Construction commences" is as defined in Section 260.10 of this chapter under "existing facility".

265.255 Action Leakage Rates

(a) The owner or operator of waste pile units subject to Section 265.254 must submit a proposed action leakage rate to the Regional Administrator when submitting the notice required under Section 265.254. Within 60 days of receipt of the notification, the Regional Administrator will: Establish an action leakage rate, either as proposed by the owner or operator or modified using the criteria in this section; or extend the review period for up to 30 days. If no action is taken by the Regional Administrator before the original 60 or extended 90 day review periods, the action leakage rate will be approved as proposed by the owner or operator.

(b) The Regional Administrator shall approve an action leakage rate for surface impoundment units subject to Section 265.254. The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

(c) To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly flow rate from the monitoring data obtained under Section 265.260, to an average daily flow rate (gallons per acre per day) for each sump. Unless the Regional Administrator approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period.

265.256 Special requirements for ignitable or reactive waste.

(a) Ignitable or reactive waste must not be placed in a pile unless the waste and pile satisfy all applicable requirements of 40 CFR part 268, and:
  (1) 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 under Section 261.21 or 261.23 of this chapter, and (ii) complies with Section 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.

265.257 Special requirements for incompatible wastes

(a) Incompatible wastes, or incompatible wastes and materials, (see Appendix V for examples) must not be placed in the same pile, unless Section 265.17(b) is complied with.

(b) A pile of hazardous waste that is incompatible with any waste or other material stored nearby in other containers, piles, open tanks, or surface impoundments must be separated from the other materials, or protected from them by means of a dike, berm, wall, or other device.

[Comment: The purpose of this is to prevent fires, explosions, gaseous emissions, leaching, or other discharge of hazardous waste or hazardous waste constituents which could result from the contact or mixing of incompatible wastes or materials.]

(c) Hazardous waste must not be piled on the same area where incompatible wastes or materials were previously piled, unless that area has been decontaminated sufficiently to ensure compliance with Section 265.17(b).

265.258 Closure and post-closure care.

(a) At closure, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless Section 261.3(d) of this chapter applies; or

(b) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated component, subsoils, structures, and equipment as required in paragraph (a) of

this section, the owner or operator finds that not all contaminated subsoils 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 (Section 265.310).

265.259 Response actions.

(a) The owner or operator of waste pile units subject to Section 265.254 must submit a response action plan to the Regional Administrator when submitting the proposed action leakage rate under Section 265.255. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in paragraph (b) of this section.

(b) If the flow rate into the leak determination system exceeds the action leakage rate for any sump, the owner or operator must:
   (1) Notify the Regional Administrator in writing of the exceedence within 7 days of the determination;
   (2) Submit a preliminary written assessment to the Regional Administrator within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;
   (3) Determine to the extent practicable the location, size, and cause of any leak;
   (4) Determine whether waste receipts should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;
   (5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and
   (6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Regional Administrator the results of the analyses specified in paragraphs (b)(3), (4), and (5) of this section, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the Regional Administrator a report summarizing the results of any remedial actions taken and actions planned.

(c) To make the leak and/or remediation determinations in paragraphs (b)(3), (4), and (5) of this section, the owner or operator must:
   (1) (i) Assess the source of liquids and amounts of liquids by source,
   (ii) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and
   (iii) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or
   (2) Document why such assessments are not needed.

265.260 Monitoring and inspection.

An owner or operator required to have a leak detection system under Section 265.254 must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

(m) 40 CFR 265.270 through 265.282 (Subpart M), "Land Treatment", are incorporated by reference including subsequent amendments and editions.

SUBPART M - LAND TREATMENT

265.270 Applicability

The regulations in this subpart apply to owners and operators of hazardous waste land treatment facilities, except as Section 265.1 provides otherwise.

265.271 [Reserved]

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 nonhazardous by degradation, transformation, or immobilization processes occurring in or on the soil.
(b) The owner or 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 or operator must design, construct, operate, and maintain a run-off 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 (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.
(e) If the treatment zone contains particulate matter which may be subject to wind dispersal, the owner or operator must manage the unit to control wind dispersal.

265.273 Waste Analysis.

In addition to the waste analyses required by Section 265.13, before placing a hazardous waste in or on a land treatment facility, the owner or operator must:
(a) Determine the concentrations in the waste of any substances which equal or exceed the maximum concentrations contained in Table I of Section 261.24 of this chapter that cause a waste to exhibit the Toxicity Characteristic;
(b) For any waste listed in Part 261, Subpart D of this chapter, 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 each of the following constituents: arsenic, cadmium, lead, and mercury, *unless* the owner or operator has written, documented data that show that the constituent is not present.

[Comment: Part 261 of this chapter specifies the substances for which a waste is listed as a hazardous waste. As required by Section 265.13, the waste analysis plan must include analyses needed to comply with Sections 265.281 and 265.282. As required by Section 265.73, the owner or operator must place the results from each waste analysis, or the documented information, in the operating record of the facility.]

265.274-265.275 [Reserved]

265.276 Food chain crops

(a) An owner or operator of a hazardous wasteland treatment facility on which food chain crops are being grown, or have been grown and will be grown in the future, must notify the Regional Administrator within 60 days after the effective date of this part.

[Comment: The growth of food chain crops at a facility which has never before been used for this purpose is a significant change in process under Section 122.72(c) of this chapter. Owners or operators of such land treatment

facilities who propose to grow food chain crops after the effective date of this part must comply with Section 122.72(c) of this chapter.]

(b) (1) Food chain crops must not be grown on the treated area of a hazardous wasteland treatment facility unless the owner or operator can demonstrate, based on field testing, that any arsenic, lead, mercury, or other constituents identified under Section 265.273(b):

(i) Will not be transferred to the food portion of the crop by plant uptake or direct contact, and will not otherwise be ingested by food chain animals (e.g., by grazing); or

(ii) Will not occur in greater concentrations in the crops grown on the land treatment facility than in the same crops grown on untreated soils under similar conditions in the same region.

(2) The information necessary to make the demonstration required by paragraph (b)(1) of this section must be kept at the facility and must, at a minimum:

(i) Be based on tests for the specific waste and application rates being used at the facility; and

(ii) Include descriptions of crop and soil characteristics, sample selection criteria, sample size determination, analytical methods, and statistical procedures.

(c) Food chain crops must not be grown on a land treatment facility receiving waste that contains cadmium unless all requirements of paragraphs (c)(1)(i) through (iii) of this section, or all requirements of paragraphs (c)(2)(i) through (iv) of this section are met.

(1) (i) The pH of the waste and soil mixture is 6.5 or greater at the time of each waste application, except for waste containing cadmium at concentrations of 2 mg/kg (dry weight) or less;

(ii) The annual application of cadmium from waste does not exceed 0.5 kilograms per hectare (kg/ha) on land used for production of tobacco, leafy vegetables, or root crops grown for human consumption. For other food chain crops, the annual cadmium application rate does not exceed:

Time period	Annual Cd application rate (kg/ha)
Present to June 30, 1984	2.0
July 1, 1984 to Dec. 31, 1986	1.25
Beginning Jan. 1, 1987	0.5

(iii) The cumulative application of cadmium from waste does not exceed the levels in either paragraph (c)(1) (iii)(A) or (B) of this section.

(A)

	Maximum cumulative application (kg/ha)	
Soil caption exchange capacity (meq/100g)	Back-ground soil pH less than 6.5	Back-ground soil pH greater than 6.5
Less than 5	5	5
15 to 15	5	10
Greater than 15	5	20

(B) For soils with a background pH of less than 6,5m the cumulative cadmium application rate does not exceed the levels below: *Provided,* that the pH of the waste and soil mixture is adjusted to and maintained at 6.5 or greater whenever food chain crops are grown

Soil caption exchange capacity (meq/100g)	Maximum cumulative application (kg/ha)
Less than 5	5
5 to 15	10
Greater than 15	20

(2) (i) The only food chain crop produced is animal feed.

(ii) The pH of the waste and soil mixture is 6.5 or greater at the time of waste application or at the time the crop is planted, whichever occurs later, and this pH level is maintained whenever food chain crops are grown.

(iii) There is a facility operating plan which demonstrates how the animal feed will be distributed to preclude ingestion by humans. The facility operating plan describes the measures to be taken to safeguard against possible health hazards from cadmium entering the food chain, which may result from alternative land uses.

(iv) Future property owners are notified by a stipulation in the land record or property deed which states that the property has received waste at high cadmium application rates and that food chain crops must not be grown except in compliance with paragraph (c)(2) of this section.

[Comment: As required by Section 265.73, if an owner or operator grows food chain crops on his land treatment facility, he must place the information developed in this section in the operating record of the facility.]

265.277 [Reserved]

265.278 Unsaturated zone (zone of aeration) monitoring

(a) The owner or operator must have in writing, and must implement, an unsaturated zone monitoring plan which is designed to:

(1) Detect the vertical migration of hazardous waste and hazardous waste constituents under the active portion of the land treatment facility; and

(2) Provide information on the background concentrations of the hazardous waste and hazardous waste constituents in similar but untreated soils nearby; this background monitoring must be conducted before or in conjunction with the monitoring required under paragraph (a)(1) of this section.

(b) The unsaturated zone monitoring plan must include, at a minimum:

(1) Soil monitoring using soil cores; and

(2) Soil-pore water monitoring using devices such as lysimeters.

(c) To comply with paragraph (a)(1) of this section, the owner or operator must demonstrate in his unsaturated zone monitoring plan that:

(1) The depth at which soil and soil-pore water samples are to be taken is below the depth to which the waste is incorporated into the soil.

(2) The number of soil and soil-pore water samples to be taken is based on the variability of:

(i) The hazardous waste constituents (as identified in Section 265.273(a) and (b)) in the waste and in the soil; and

(ii) The soil type(s); and

(3) The frequency and timing of soil and soil-pore water sampling is based on the frequency, time, and rate of waste application, proximity to ground water, and soil permeability.

(d) The owner or operator must keep at the facility his unsaturated zone monitoring plan and the rationale used in developing this plan.

(e) The owner or operator must analyze the soil and soil-pore water samples for the hazardous waste constituents that were found in the waste during the waste analysis under Section 265.273(a) and (b).

[Comment: As required by Section 265.73, all data and information developed by the owner or operator under this section must be placed in the operating record of the facility.]

265.279 Recordkeeping.

The owner or operator must include hazardous waste application dates and rates in the operating record required under Section 265.73.

265.280 Closure and post-closure.

(a) In the closure plan under Section 265.112 and the post-closure plan under Section 265.118, the owner or operator must address the following objectives and indicate how they will be achieved:
  (1) Control of the migration of hazardous waste and hazardous waste constituents from the treated area into the ground water;
  (2) Control of the release of contaminated run-off from the facility into surface water.
  (3) Control of the release of airborne particulate contaminants caused by wind erosion; and
  (4) Compliance with Section 265.276 concerning the growth of food chain crops.

(b) The owner or operator must consider at least the following factors in addressing the closure and post-closure care objectives of paragraph (a) of this section:
  (1) Type and amount of hazardous waste and hazardous waste constituents applied to the land treatment facility;
  (2) The mobility and the expected rate of migration of the hazardous waste and hazardous waste constituents;
  (3) Site location, topography, and surrounding land use, with respect to the potential effects of pollutant migration (e.g., proximity to ground water, surface water, and drinking water sources);
  (4) Climate, including amount, frequency, and pH of precipitation;
  (5) Geological and soil profiles and surface and subsurface hydrology of the site, and soil characteristics, including cation exchange capacity, total organic carbon, and pH;
  (6) Unsaturated zone monitoring information obtained under Section 265.278; and
  (7) Type, concentration, and depth of migration of hazardous waste constituents in the soil as compared to their background concentrations.

(c) The owner or operator must consider at least the following methods in addressing the closure and post-closure care objectives of paragraph (a) of this section:
  (1) Removal of contaminated soils;
  (2) Placement of a final cover, considering:
    (i) Functions of the cover (e.g., infiltration control, erosion and run-off control, and wind erosion control); and
    (ii) Characteristics of the cover, including material, final surface contours, thickness, porosity and permeability, slope, length of run of slope, and type of vegetation on the cover; and
  (3) Monitoring of ground water.

(d) In addition to the requirements of Subpart G of this part, during the closure period, the owner or operator of a land treatment facility must:
  (1) Continue unsaturated zone monitoring in a manner and frequency specified in the closure plan, except that soil pore liquid monitoring may be terminated 90 days after the last application of waste to the treatment zone;
  (2) Maintain the run-on control system required under Section 265.272(b);
  (3) Maintain the run-off management system required under Section 265.272(c); and
  (4) Control wind dispersal of particulate matter which may be subject to wind dispersal.

(e) For the purpose of complying with Section 265.115, when closure is completed, the owner or operator may submit to the Regional Administrator certification both by the owner or operator and by an independent qualified soil scientist, in lieu of an independent registered professional engineer, that the facility has been closed in accordance with the specifications in the approved closure plan.

(f) In addition to the requirements of Section 265.117, during the post-closure care period, the owner or operator of a land treatment unit must:
  (1) Continue soil-core monitoring by collecting and analyzing samples in a manner and frequency specified in the post-closure plan;
  (2) Restrict access to the unit as appropriate for its post-closure use;
  (3) Assure that growth of food chain crops complies with Section 265.276; and
  (4) Control wind dispersal of hazardous waste.

265.281 Special requirements for ignitable and reactive waste.

The owner or operator must not apply ignitable or reactive waste to the treatment zone unless the waste and treatment zone meet all applicable requirements of 40 CFR part 268, and:

(a) The waste is immediately incorporated into the soil so that:
    (1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under Section 265.21 or 261.23 of this chapter, and
    (2) Section 264.17(b) is complied with; or
(b) The waste is managed in such a way that it is protected from any material or conditions which may cause it to react.

265.282 Special requirements for incompatible wastes.

Incompatible wastes, or incompatible wastes and materials (see Appendix V for examples), must not be placed in the same land treatment area, unless Section 265.27(b) is complied with.

(n) 40 CFR 265.300 through 265.316 (Subpart N), "Landfills", are incorporated by reference including subsequent amendments and editions.

SUBPART N - LANDFILLS

265.300 Applicability.

The regulations in this subpart apply to owners and operators of facilities that dispose of hazardous waste in landfills, except as Section 265.1 provides otherwise. A waste pile used as a disposal facility is a landfill and is governed by this subpart.

265.301 Design and Operating Requirements.

(a) The owner or operator of each new landfill unit on which construction commences after January 29, 1992, each lateral expansion of a landfill unit on which construction commences after July 29, 1992, and each replacement of an existing landfill unit that is to commence reuse after July 29, 1992 must install two or more liners and a leachate collection and removal system above and between such liners, and operate the leachate collection and removal systems, in accordance with Section 264.301(d), (e), or (f), of this chapter. "Construction commences" is as defined in Section 260.10 of this chapter under "existing facility".

(b) The owner or operator of each unit referred to in paragraph (a) of this section must notify the Regional Administrator at least sixty days prior to receiving waste. The owner or operator of each facility submitting notice must file a Part B application within six months of the receipt of such notice.

(c) The owner or operator of any replacement landfill unit is exempt from paragraph (a) of this section if:
  (1) The existing unit was constructed in compliance with the design standards of section 3004(o)(1)(A)(i) and (o)(5) of the Resource Conservation and Recovery Act; and
  (2) There is no reason to believe that the liner is not functioning as designed.

(d) The double liner requirement set forth in paragraph (a) of this section may be waived by the Regional Administrator for any monofill if:
  (1) The monofill contains only hazardous wastes from foundry furnace emission controls or metal casting molding sand, and such wastes do not contain constituents which would render the wastes hazardous for reasons other than the EP toxicity characteristics in Section 261.24 of this chapter, and
  (2) (i) (A) The monofill has at least one liner for which there is no evidence that such liner is leaking;
    (B) The monofill is located more than one-quarter mile from an underground source of drinking water (as that term is defined in Section 144.3 of this chapter); and
    (C) The monofill is in compliance with generally applicable ground water monitoring requirements for facilities with permits under RCRA Section 3005(c); or
    (ii) The owner or operator demonstrates that the monofill is located, designed, and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

(e) In the case of any unit in which the liner and leachate collection system has been installed pursuant to the requirements of paragraph (a) of this section and in good faith compliance with paragraph (a) of this section and with guidance documents governing liners and leachate collection systems under paragraph (a) of this section, no liner or leachate collection system which is different from that which was so installed pursuant to paragraph (a) of this section will be required for such unit by the Regional Administrator when issuing the first permit to such facility, except that the Regional Administrator will not be precluded from requiring installation of a new liner when the Regional Administrator has reason to believe that any liner installed pursuant to the requirements of paragraph (a) of this section is leaking.

(f) The owner or 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.

(g) The owner or operator must design, construct, operate, and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(h) Collection and holding facilities (e.g., tanks or basins) associated with run-on and run-off control systems must be emptied or otherwise managed expeditiously after storms to maintain design capacity of the system.

(i) The owner or operator of a landfill containing hazardous waste which is subject to dispersal by wind must cover or otherwise manage the landfill so that wind dispersal of the hazardous waste is controlled.

[Comment: As required by section 265.13, the waste analysis plan must include analyses needed to comply with Sections 265.312, 265.313, and 265.314. As required by Section 265.73, the owner or operator must place the results of these analyses in the operating record of the facility]

265.302 Action Leakage Rate.

(a) The owner or operator of landfill units subject to Section 265.301(a) must submit a proposed action leakage rate to the Regional Administrator when submitting the notice required under Section 265.301(b). Within 60 days of receipt of the notification, the Regional Administrator will: Establish an action leakage rate, either as proposed by the owner or operator or modified using the criteria in this section; or extend the review period for up to 30 days. If no action is taken by the Regional Administrator before the original 60 or extended 90 day review periods, the action leakage rate will be approved as proposed by the owner or operator.

(b) The Regional Administrator shall approve an action leakage rate for surface impoundment units subject to Section 265.301(a). The action leakage rate is the maximum design flow rate that the leak detection system (LDS) can remove without the fluid head on the bottom liner exceeding 1 foot. The action leakage rate must include an adequate safety margin to allow for uncertainties in the design (e.g., slope, hydraulic conductivity, thickness of drainage material), construction, operation, and location of the LDS, waste and leachate characteristics, likelihood and amounts of other sources of liquids in the LDS, and proposed response actions (e.g., the action leakage rate must consider decreases in the flow capacity of the system over time resulting from siltation and clogging, rib layover and creep of synthetic components of the system, overburden pressures, etc.).

(c) To determine if the action leakage rate has been exceeded, the owner or operator must convert the weekly or monthly flow rate from the monitoring data obtained under Section 265.304 to an average daily flow rate (gallons per acre per day) for each sump. Unless the Regional Administrator approves a different calculation, the average daily flow rate for each sump must be calculated weekly during the active life and closure period, and monthly during the post-closure care period when monthly monitoring is required under Section 265.304(b).

265.303 Response Actions

(a) The owner or operator of landfill units subject to Section 265.301(a) must submit a response action plan to the Regional Administrator when submitting the proposed action leakage rate under Section 265.302. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in paragraph (b) of this section.

(b) If the flow rate into the leak detection system exceeds the action leakage rate for any sump, the owner or operator must:
  (1) Notify the Regional Administrator in writing of the exceedence within 7 days of the determination;
  (2) Submit a preliminary written assessment to the Regional Administrator within 14 days of the determination, as to the amount of liquids, likely sources of liquids, possible location, size, and cause of any leaks, and short-term actions taken and planned;
  (3) Determine to the extent practicable the location, size, and cause of any leak;
  (4) Determine whether waste receipt should cease or be curtailed, whether any waste should be removed from the unit for inspection, repairs, or controls, and whether or not the unit should be closed;
  (5) Determine any other short-term and longer-term actions to be taken to mitigate or stop any leaks; and
  (6) Within 30 days after the notification that the action leakage rate has been exceeded, submit to the Regional Administrator the results of the analyses specified in paragraphs (b)(3), (4), and (5) of this section, the results of actions taken, and actions planned. Monthly thereafter, as long as the flow rate in the leak detection system exceeds the action leakage rate, the owner or operator must submit to the Regional Administrator a report summarizing the results of any remedial actions taken and actions planned.

(c) To make the leak and/or remediation determinations in paragraphs (b)(3), (4), and (5) of this section, the owner or operator must:
  (1) (i) Assess the source of liquids and amounts of liquids by source.
  (ii) Conduct a fingerprint, hazardous constituent, or other analyses of the liquids in the leak detection system to identify the source of liquids and possible location of any leaks, and the hazard and mobility of the liquid; and
  (iii) Assess the seriousness of any leaks in terms of potential for escaping into the environment; or
  (2) Document why such assessments are not needed.

265.304 Monitoring and Inspection

(a) An owner or operator required to have a leak detection system under Section 265.301(a) must record the amount of liquids removed from each leak detection system sump at least once each week during the active life and closure period.

(b) After the final cover is installed, the amount of liquids removed from each leak detection system sump must be recorded at least monthly. If the liquid level in the sump stays below the pump operating level for two consecutive months, the amount of liquids in the sumps must be recorded at least quarterly. If the liquid level in the sump stays below the pump operating level for two consecutive quarters, the amount of liquids in the sumps must be recorded at least semi-annually. If at any time during the post-closure care period the pump operating level is exceeded at units on quarterly or semi-annual recording schedules, the owner or operator must return to monthly recording of amounts of liquids removed from each sump until the liquid level again stays below the pump operating level for two consecutive months.

(c) "Pump operating level" is a liquid level proposed by the owner or operator and approved by the Regional Administrator based on pump activation level, sump dimensions, and level that avoids backup into the drainage layer and minimizes head in the sump. The timing for submission and approval of the proposed "pump operating level" will be in accordance with Section 265.302(a).

265.308 [Reserved]

265.309 Surveying and recordkeeping.

The owner or operator of a landfill must maintain the following items in the operating record required in Section 265.73:

(a) On a map, the exact location and dimensions, including depth, of each cell with respect to permanently surveyed benchmarks; and

(b) The contents of each cell and the approximate location of each hazardous waste type within each cell.

265.310 Closure and post-closure.

(a) At final closure of the landfill or upon closure of any cell, the owner or operator must cover the landfill or cell with a final cover designed and constructed to:
  (1) Provide long-term minimization of migration of liquids through the closed landfill;
  (2) Function with minimum maintenance;
  (3) Promote drainage and minimize erosion or abrasion of the cover;
  (4) Accommodate settling and subsidence so that the cover's integrity is maintained; and
  (5) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present.

(b) After final closure, the owner or operator must comply with all post-closure requirements contained in Sections 265.117-265.120 including maintenance and monitoring throughout the post-closure care period. The owner or operator must:
  (1) Maintain the integrity and effectiveness of the final cover, including making repairs to the cover as necessary to correct the effects of settling, subsidence, erosion, or other events;
  (2) Maintain and monitor the leak detection system in accordance with Sections 264.301(c)(3)(iv) and (4) of this chapter and 265.304(b), and comply with all other applicable leak detection system requirements of this part;
  (3) Maintain and monitor the ground-water monitoring system and comply with all other applicable requirements of subpart F of this part;
  (4) Prevent run-on and run-off from eroding or otherwise damaging the final cover; and
  (5) Protect and maintain surveyed benchmarks used in complying with Section 265.309.

265.311 [Reserved]

265.312 Special requirements for ignitable or reactive waste.

(a) Except as provided in paragraph (b) of this section, and in Section 265.316, ignitable or reactive waste must not be placed in a landfill, unless the waste and landfill meets all applicable requirements of 40 CFR part 268, and:

(1) The resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under Section 261.21 or 261.23 of this chapter; and
(2) Section 265.17(b) is complied with.

(b) Except for prohibited wastes which remain subject to treatment standards in subpart D of part 268, ignitable wastes in containers may be landfilled without meeting the requirements of paragraph (a) of this section, provided that the wastes are disposed in such a way that they are protected from any material or conditions which may cause them to ignite. At a minimum, ignitable wastes must be disposed in non-leaking containers which are carefully handled and placed so as to avoid heat, sparks, rupture, or any other condition that might cause ignition of the wastes; must be covered daily with soil or other non-combustible material to minimize the potential for ignition of the wastes; and must not be disposed of in cells that contain or will contain other wastes which may generate heat sufficient to cause ignition of the waste.

265.313 Special requirements for incompatible wastes.

Incompatible wastes, or incompatible wastes and materials (see Appendix V for examples) must not be placed in the same landfill cell, unless Section 265.27(b) is complied with.

265.314 Special requirements for bulk and containerized liquids.

(a) Bulk or non-containerized liquid waste or waste containing free liquids may be placed in a landfill prior to May 8, 1985 only if:
(1) The landfill has a liner and leachate collection and removal system that meets the requirements of Section 264.301(a) of this chapter; or
(2) Before disposal, the liquid waste or waste containing free liquids is treated or stabilized, chemically or physically (e.g., by mixing with a sorbent solid), so that free liquids are no longer present.

(b) Effective May 8, 1985, the placement of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids (whether or not sorbents have been added) in any landfill is prohibited.

(c) Containers holding free liquids must not be placed in a landfill unless:
(1) All free-standing liquid (i) has been removed by decanting, or other methods, (ii) has been mixed with sorbent or solidified so that free-standing liquid is no longer observed; or (iii) had been otherwise eliminated; or
(2) The container is very small such as an ampule; or
(3) The container is designed to hold free liquids for use other than storage, such as a battery or capacitor; or
(4) The container is a lab pack as defined in Section 265.316 and is disposed of in accordance with Section 265.316.

(d) To demonstrate the absence or presence of free liquids in either a containerized or a bulk waste, the following test must be used: Method 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of this chapter.

(e) The date for compliance with paragraph (a) of this section is November 19, 1981. The date for compliance with paragraph (c) of this section is March 22, 1982.

(f) Sorbents used to treat free liquids to be disposed of in landfills must be nonbiodegradable. Nonbiodegradable sorbents are: materials listed or described in paragraph (f)(1) of this section; materials that pass one of the tests in paragraph (f)(2) of this section; or materials that are determined by EPA to be nonbiodegradable through the Part 260 petition process.
(1) Nonbiodegradable sorbents.
(i) Inorganic minerals, other inorganic materials, and elemental carbon (e.g., aluminosilicates, clays, smectites, Fuller's earth, bentonite, calcium bentonite, montmorillonite, calcined montmorillonite, kaolinite, micas (illite), vermiculites, zeolites; calcium carbonate (organic free limestone); oxides/hydroxides, alumina, lime, silica (sand), diatomaceous earth; perlite (volcanic glass); expanded volcanic rock; volcanic ash; cement kiln dust; fly ash; rice hull ash; activated charcoal/activated carbon); or
(ii) High molecular weight synthetic polymers (e.g., polyethylene, high density polyethylene (HDPE), polypropylene, polystyrene, polyurethane, polyacrylate, polynorborene, polysobutylene, ground synthetic rubber, cross-linked allylstyrene and tertiary butyl copolymers). This does not include polymers derived from biological material or polymers specifically designed to be degradable; or
(iii) Mixtures of these nonbiodegradable materials.

(2) Tests for nonbiodegradable sorbents.
  (i) The sorbent material is determined to be nonbiodegradable under ASTM Method G21-70 (1984a)--Standard Practice for Determining Resistance of Synthetic Polymer Materials to Fungi; or
  (ii) The sorbent material is determined to be nonbiodegradable under ASTM Method G22-76 (1984b)--Standard Practice for Determining Resistance of Plastics to Bacteria.

(g) Effective November 8, 1985, the placement of any liquid which is not a hazardous waste in a landfill is prohibited unless the owner or operator of such landfill demonstrates to the Regional Administrator, or the Regional Administrator determines, that:
  (1) The only reasonably available alternative to the placement in such landfill is placement in a landfill or unlined surface impoundment, whether or not permitted or operating under interim status, which contains, or may reasonably be anticipated to contain, hazardous waste; and
  (2) Placement in such owner or operator's landfill will not present a risk of contamination of any underground source of drinking water (as that term is defined in Section 144.3 of this chapter).

265.315 Special requirements for containers.

Unless they are very small, such as an ampule, containers must be either:
(a) At least 90 percent full when placed in the landfill; or
(b) Crushed, shredded, or similarly reduced in volume to the maximum practical extent before burial in the landfill.

265.316 Disposal of small containers of hazardous waste in overpacked drums (lab packs).

Small containers of hazardous waste in overpacked drums (lab packs) may be placed in a landfill if the following requirements are met:
(a) Hazardous waste must be packaged in non-leaking inside containers. The inside containers must be of a design and constructed of a material that will not react dangerously with, be decomposed by, or be ignited by the waste held therein. Inside containers must be tightly and securely sealed. The inside containers must be of the size and type specified in the Department of Transportation (DOT) hazardous materials regulations (49 CFR Parts 173, 178 and 179), if those regulations specify a particular inside container for the waste.
(b) The inside containers must be overpacked in an open head DOT-specification metal shipping container (49 CFR Parts 178 and 179) of no more than 416-liter (110 gallon) capacity and surrounded by, at a minimum, a sufficient quantity of sorbent material, determined to be nonbiodegradable in accordance with Section 265.314(f), to completely sorb all of the liquid contents of the inside containers. The metal outer container must be full after it has been packed with inside containers and sorbent material.
(c) The sorbent material used must not be capable of reacting dangerously with, being decomposed by, or being ignited by the contents of the inside container's, in accordance with Section 265.17(b).
(d) Incompatible wastes, as defined in Section 260.10(a) of this chapter, must not be placed in the same outside container.
(e) Reactive waste, other than cyanide- or sulfide-bearing waste, as defined in Section 261.23(a)(5) of this chapter, must be treated or rendered non-reactive prior to packaging in accordance with paragraphs (2) through (d) of this section. Cyanide- and sulfide-bearing reactive waste may be packaged in accordance with paragraphs (a) through (d) of this section without first being treated or rendered non-reactive.
(f) Such disposal is in compliance with the requirements of 40 CFR part 268. Persons who incinerate lab packs according to the requirements in 40 CFR 268.42(c)(1) may use fiber drums in place of metal outer containers. Such fiber drums must meet the DOT specifications in 49 CFR 173.12 and be overpacked according to the requirements in paragraph (b) of this section.

(o) 40 CFR 265.340 through 265.352 (Subpart O), "Incinerators", are incorporated by reference including subsequent amendments and editions.

SUBPART O - INCINERATORS

265.340 Applicability.

(a) The regulations of this subpart apply to owners and operators of hazardous waste incinerators (as defined in Section 260.10 of this chapter), except as Section 265.1 provides otherwise.
(b) Owners and operators of incinerators burning hazardous waste are exempt from all of the requirements of this subpart, except Section 265.351 (Closure), provided that the owner or operator has documented, in writing, that the waste would not reasonably be expected to contain any of the hazardous constituents listed in Part 261, Appendix VIII, of this chapter, and such documentation is retained at the facility, if the waste to be burned is:
    (1) Listed as a hazardous waste in Part 261, Subpart D of this chapter solely because it is ignitable (Hazard Code I), corrosive (Hazard Code C), or both; or
    (2) Listed as a hazardous waste in Part 261, Subpart D of this chapter solely because it is reactive (Hazard Code R) for characteristics other than those listed in Section 261.23 (a)(4) and (5), and will not be burned when other hazardous wastes are present in the combustion zone; or
    (3) A hazardous waste solely because it possesses the characteristic of ignitability, corrosivity, or both, as determined by the tests for characteristics of hazardous wastes under Part 261, Subpart C of this chapter; or
    (4) A hazardous waste solely because it possesses the reactivity characteristics described by Section 261.23(a)(1), (2), (3), (6), (7), or (8) of this chapter, and will not be burned when other hazardous wastes are present in the combustion zones.

265.341 Waste analysis.

In addition to the waste analyses required by Section 265.13, the owner or operator must sufficiently analyze any waste which he has not previously burned in his incinerator to enable him to establish steady state (normal) operating conditions (including waste and auxiliary fuel feed and air flow) and to determine the type of pollutants which might be emitted. At a minimum, the analysis must determine:
(a) Heating value of the waste;
(b) Halogen content and sulfur content in the waste; and
(c) Concentrations in he waste of lead and mercury, unless the owner or operator has written documented data that show that the element is not present.

[Comment: As required by Section 265.73, the owner or operator must place the results from each waste analysis, or the documented information, in the operating record of the facility.]

265.342-265.344 [Reserved]

265.345 General operating requirements.

During start-up and shut-down of an incinerator, the owner or operator must not feed hazardous waste unless the incinerator is a steady state (normal) conditions of operation, including steady state operating temperature and air flow.

265.346 [Reserved]

265.347 Monitoring and inspections.

The owner or operator must conduct, at a minimum, 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 corrections to maintain steady state combustion conditions must be made immediately

either automatically or by the operator. In instruments which relate to combustion and emission control would normally include those measuring waste feed, auxiliary fuel feed, air flow, incinerator temperature, scrubber flow, scrubber pH, and relevant level controls.

(b) The complete incinerator and associated equipment (pumps, valves, conveyers, pipes, etc.) must be inspected at least daily for leaks, spills, and fugitive emissions, and all emergency shutdown controls and system alarms must be checked to assure proper operation.

265.348-265.350 [Reserved]

265.351 Closure.

At closure, the owner or operator must remove all hazardous waste and hazardous waste residues (including but not limited to ash, scrubber waters, and scrubber sludges) from the incinerator.

[Comment: At closure, as throughout the operating period, unless the owner or operator can demonstrate, in accordance with Section 261.3(d) of this chapter, that the residue removed from his incinerator is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of Parts 262-266 of this chapter.]

265.352 Interim status incinerators burning particular hazardous wastes.

(a) Owners or operators of incinerators subject to this subpart may burn EPA Hazardous Wastes FO20, FO21, FO22, FO23 FO26, or FO27 if they receive a certification from the Assistant Administrator for Solid Waste and Emergency Response that they can meet the performance standards of Subpart O of Part 264 when they burn these wastes.

(b) The following standards and procedures will be used in determining whether to certify an incinerator:

(1) The owner or operator will submit an application to the Assistant Administrator for Solid Waste and Emergency Response containing applicable information in Sections 270.19 and 270.62, demonstrating that the incinerator can meet the performance standards in Subpart O of Part 264 when they burn these wastes.

(2) The Assistant Administrator for Solid Waste and Emergency Response will issue a tentative decision as to whether the incinerator can meet the performance standards in Subpart O of Part 264. Notification of this tentative decision will be provided by newspaper advertisement and radio broadcast in the jurisdiction where the incinerator is located. The Assistant Administrator for Solid Waste and Emergency Response will accept comment on the tentative decision for 60 days. The Assistant Administrator for Solid Waste and Emergency Response also may hold a public hearing upon request or at his discretion.

(3) After the close of the public comment period, the Assistant Administrator of Solid Waste and Emergency Response will issue a decision whether or not to certify the incinerator.

265.353-265.369 [Reserved]

(p) 40 CFR 265.370 through 265.383 (Subpart P), "Thermal Treatment", are incorporated by reference including subsequent amendments and editions.

SUBPART P - THERMAL TREATMENT

265.370 Other thermal treatment

The regulations in this subpart apply to owners or operators of facilities that thermally treat hazardous waste in devices other than enclosed devices using controlled flame combustion, except as Section 265.1 provides otherwise. Thermal treatment in enclosed devices using controlled flame combustion is subject to the requirements of Subpart O if the unit is an incinerator.

265.371-265.372 [Reserved]

265.373 General operating requirements.

Before adding hazardous waste, the owner or operator must bring his thermal treatment process to steady state (normal) conditions of operation -- including steady state operating temperature -- using auxiliary fuel or other means, unless the process is a non-continuous (batch) thermal treatment process which requires a complete thermal cycle to treat a discrete quantity of hazardous waste.

265.374 [Reserved]

265.375 Waste analysis.

In addition to the waste analyses required by Section 265.23, the owner or operator must sufficiently analyze any waste which he has not previously treated in his thermal process to enable him to establish steady state (normal) or other appropriate (for a non-continuous process) operating conditions (including waste and auxiliary fuel feed) and to determine the type of pollutants which might be emitted. At a minimum, the analysis must determine:

(a) Heating value of the waste;
(b) Halogen content and sulfur content in the waste; and
(c) Concentrations in the waste of lead and mercury, *unless* the owner or operator has written, documented data that show that the element is not present.

[Comment: As required by Section 265.73, the owner or operator must place the results from each waste analysis, or the documented information, in the operating record of the facility.]

265.376 [Reserved]

265.377 Monitoring and inspections.

(a) The owner or operator must conduct, as a minimum, the following monitoring and inspections when thermally treating hazardous waste:
    (1) Existing instruments which relate to temperature and emission control (if an emission control device is present) must be monitored at least every 15 minutes. Appropriate corrections to maintain steady state or other appropriate thermal treatment conditions must be made immediately either automatically or by the operator. Instruments which relate to temperature and emission control would normally include those measuring waste feed, auxiliary fuel feed, treatment process temperature, and relevant process flow and level controls.
    (2) The stack plume (emissions), where present, must be observed visually at least hourly for normal appearance (color and opacity). The operator must immediately make any indicated operating corrections necessary to return any visible emissions to their normal appearance.
    (3) The complete thermal treatment process and associated equipment (pumps, valves, conveyors, pipes, etc.) must be inspected at least daily for leaks, spills, and fugitive emissions, and all emergency shutdown controls and system alarms must be checked t assure proper operation.

265.378-265.380 [Reserved]

265.381 Closure.

At closure, the owner or operator must remove all hazardous waste and hazardous waste residues including, but not limited to, ash) from the thermal treatment process or equipment.

[Comment: At closure, as throughout the operating period, unless the owner or operator can demonstrate, in accordance with Section 261.3(c) or (d) of this chapter, that any solid waste removed from his thermal treatment process or equipment is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with allapplicable requirements of Parts 262, 263, and 265 of this chapter.]

265.382 Open burning; waste explosives.

Open burning of hazardous waste is prohibited except for the open burning and detonation of waste explosives. Waste explosives include waste which has the potential to detonate and bulk military propellants which cannot safely be disposed of through other modes of treatment. Detonation is an explosion in which chemical transformation passes through the material faster than the speed of sound (0.33 kilometers/second at sea level). Owners or operators choosing to open burn or detonate waste explosives must do so in accordance with the following table and in a manner that does not threaten human health or the environment.

Pounds of waste explosives or propellants	Minimum distance from open burning or detonation to the property of others
0 to 100	204 meters (670 feet)
101 to 1,000	380 meters (1,250 feet)
1,001 to 10,000	530 meters (1,730 feet)
10,001 to 30,000	690 meters (2,260 feet)

265.383 Interim status thermal treatment devices burning particular hazardous waste.

(a) Owners or operators of thermal treatment devices subject to this subpart may burn EPA Hazardous Wastes FO20, FO21, FO22, FO23, FO26, or FO27 if they receive a certification from the Assistant Administrator for Solid Waste and Emergency Response that they can meet the performance standards of Subpart O of Part 264 when they burn these wastes.

(b) The following standards and procedures will be used in determining whether to certify a thermal treatment unit:
   (1) The owner or operator will submit an application to the Assistant Administrator for Solid Waste and Emergency Response containing the applicable information in Sections 270.19 and 270.62 demonstrating that the thermal treatment unit can meet the performance standard in Subpart O of Part 264 when they burn these wastes.
   (2) The Assistant Administrator for Solid Waste and Emergency Response will issue a tentative decision as to whether the thermal treatment unit can meet the performance standards in Subpart O of Part 264. Notification of this tentative decision will be provided by newspaper advertisement and radio broadcast in the jurisdiction where the thermal treatment device is located. The Assistant Administrator for Solid Waste and Emergency Response will accept comment on the tentative decision for 60 days. The Assistant Administrator for Solid Waste and Emergency Response also may hold a public hearing upon request or at his discretion.
   (3) After the close of the public comment period, the Assistant Administrator for Solid Waste and Emergency Response will issue a decision whether or not to certify the thermal treatment unit.

(q) 40 CFR 265.400 through 265.406 (Subpart Q), "Chemical, Physical, and Biological Treatment", are incorporated by reference including subsequent amendments and editions.

SUBPART Q - CHEMICAL, PHYSICAL, AND BIOLOGICAL TREATMENT

265.400 Applicability.

The regulations in this subpart apply to owners and operators of facilities which treat hazardous wastes by chemical, physical, or biological methods in other than tanks, surface impoundments, and land treatment facilities, except as Section 265.1 provides otherwise. Chemical, physical, and biological treatment of hazardous waste in tanks, surface impoundments, and land treatment facilities must be conducted in accordance with Subparts J, K, and M, respectively.

265.401 General operating requirements.

(a) Chemical, physical, or biological treatment of hazardous waste must comply with Section 265.17(b).
(b) Hazardous wastes or treatment reagents must not be placed in the treatment process or equipment if they could cause the treatment process or equipment to rupture, leak, corrode, or otherwise fail before the end of its intended life.
(c) Where hazardous waste is continuously fed into a treatment process or equipment, the process or equipment must be equipped with a means to stop this inflow (e.g., a waste feed cut-off system or by-pass system to a standby containment device).

[Comment: These systems are intended to be used in the event of a malfunction in the treatment process or equipment.]

265.402 Waste analysis and trial tests.

(a) In addition to the waste analysis required by Section 265.13, whenever:
    (1) A hazardous waste which is substantially different from waste previously treated in a treatment process or equipment at the facility is to be treated in that process or equipment; or
    (2) A substantially different process than any previously used at the facility is to be used to chemically treat hazardous waste; the owner or operator must, before treating the different waste or using the different process or equipment:
        (i) Conduct waste analyses and trial treatment tests (e.g., bench scale or pilot plant scale tests); or
        (ii) Obtain written, documented information on similar treatment of similar waste under similar operating conditions to show that that this proposed treatment will meet all applicable requirements of Section 265.401(a) and (b).

[Comment: As required by Section 265.13, the waste analysis plan must include analyses needed to comply with Sections 265.405 and 265.406. As required by Section 265.73, the owner or operator must place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility.]

265.403 Inspections.

(a) The owner or operator of a treatment facility must inspect, where present:
    (1) Discharge control and safety equipment (e.g., waste feed cut-off systems, by-pass systems, drainage systems, and pressure relief systems) at least once each operating day, to ensure that it is in good working order;
    (2) Data gathered from monitoring equipment (e.g., pressure and temperature gauges), at least once each operating day, to ensure that the treatment process or equipment is being operated according to its design;
    (3) The construction materials of the treatment process or equipment, at least weekly, to detect corrosion or leaking of fixtures or seams; and
    (4) The construction materials of, at the area immediately surrounding, discharge confinement structures (e.g., dikes), at least weekly, to detect erosion or obvious signs of leakage (e.g., wet spots or dead vegetation).

[Comment: As required by Section 265.15(c), the owner or operator must remedy any deterioration or malfunction he finds.]

265.404 Closure.

At closure, all hazardous waste and hazardous waste residues must be removed from treatment processes or equipment, discharge control equipment, and discharge confinement structures.

[Comment: At closure, as throughout the operating period, unless the owner or operator can demonstrate, in accordance with Section 261.3(c) or (d) of this chapter, that any solid waste removed from his treatment process or equipment is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements of Parts 262,263, and 265 of this chapter.

265.405 Special requirements for ignitable or reactive waste.

(a) Ignitable or reactive waste must not be placed in a treatment process or equipment, unless:
    (1) The waste is treated, rendered, or mixed before or immediately after placement in the treatment process or equipment, so that (i) the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under Section 261.21 or 261.23 of this chapter, and (ii) Section 265.17(b) is complied with; or
    (2) The waste is treated in such a way that it is protected from any material or conditions which may cause the waste to ignite or react.

265.406 Special requirements for incompatible wastes.

(a) Incompatible wastes, or incompatible wastes and materials (see Appendix V for examples) must not be placed in the same treatment process or equipment, unless Section 265.17(b) is complied with.
(b) Hazardous waste must not be placed in unwashed treatment equipment equipment which previously held an incompatible waste or material, unless Section 265.17(b) is complied with.

(r) 40 CFR 265.440 through 265.445 (Subpart W), "Drip Pads", are incorporated by reference including subsequent amendments and editions.

SUBPART W -- DRIP PADS

265.440 Applicability

(a) The requirements of this subpart apply to owners and operators of facilities that use new or existing drip pads to convey treated wood drippage, precipitation, and/or surface water run-off to an associated collection system. Existing drip pads are those constructed before December 6, 1990, and those for which the owner or 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.
The requirement at Section 265.443(b)(3) to install a leak collection system applies only to those drip pads that are constructed after December 24, 1992 except for those constructed after December 24, 1992 for which the owner or operator has a design and has entered into binding financial or other agreements for construction prior to December 24, 1992.

(b) The owner or operator of any drip pad that is inside or under a structure that provides protection from precipitation so that neither run-off nor run-on is generated is not subject to regulation under Section 265.443(e) or Section 265.443(f), as appropriate.

(c) The requirements of this subpart are not applicable to the management of infrequent and incidental drippage in storage yards provided that:
  (1) The owner or operator maintains and complies with a written contingency plan that describes how the owner or operator will respond immediately to the discharge of such infrequent and incidental drippage. At a minimum, the contingency plan must describe how the facility will do the following:
    (i) Clean up the drippage;
    (ii) Document the cleanup of the drippage;
    (iii) Retain documents regarding cleanup for three years; and
    (iv) Manage the contaminated media in a manner consistent with Federal regulations.

265.441 Assessment of existing drip pad integrity.

(a) For each existing drip pad as defined in Section 265.440 of this subpart, the owner or operator must evaluate the drip pad and determine that it meets all of the requirements of this subpart, except the requirements for liners and leak detection systems of Section 265.443(b). No later than the effective date of this rule, the owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by an independent, qualified registered professional engineer that attests to the results of the evaluation. The assessment must be reviewed, updated and re-certified annually until all upgrades, repairs, or modifications necessary to achieve compliance with all of the standards of Section 265.443 of this subpart are complete. The evaluation must document the extent to which the drip pad meets each of the design and operating standards of Section 265.443 of this subpart, except the standards for liners and leak detection systems, specified in Section 265.443(b) of this subpart.

(b) The owner or operator must develop a written plan for upgrading, repairing, and modifying the drip pad to meet the requirements of Section 265.443(b) of this subpart, and submit the plan to the Regional Administrator no later than 2 years before the date that all repairs, upgrades, and modifications are complete. This written plan must describe all changes to be made to the drip pad in sufficient detail to document compliance with all the requirements of Section 265.443 of this subpart. The plan must be reviewed and certified by an independent qualified registered professional engineer.
  (1) For existing drip pads of known and documentable age, all upgrades, repairs, and modifications must be completed within two years of the effective date of this rule, or when the drip pad has reached 15 years of age, whichever comes later.
  (2) For existing drip pads for which the age cannot be documented, within 8 years of the effective date of this rule, but if the age of the facility is greater than 7 years, all upgrades, repairs and modifications must be completed by the time the facility reaches 15 years of age or by two years after the effective date of this rule, whichever comes later.

(3) If the owner or operator believes that the drip pad will continue to meet all of the requirements of Section 265.443 of this subpart after the date upon which all upgrades, repairs and modifications must be

completed as established under paragraphs (b) (1) and (2) of this section, the owner or operator may petition the Regional Administrator for an extension of the deadline as specified in paragraph (b)(1) or (2) of this section. The Regional Administrator will grant the petition for extension based on a finding that the drip pad meets all of the requirements of Section 265.443, except those for liners and leak detection systems specified in Section 265.443(b), and that it will continue to be protective of human health and the environment.

(c) Upon completion of all, repairs, and modifications, the owner or operator must submit to the Regional Administrator or State Director, the asbuilt drawings for the drip pad together with a certification by an independent, qualified registered professional engineer attesting that the drip pad conforms to the drawings.

(d) If the drip pad is found to be leaking or unfit for use, the owner or operator must comply with the provisions of Section 265.443(m) of this subpart or close the drip pad in accordance with Section 265.445 of this subpart.

265.442 Design and installation of new drip pads.

Owners and operators of new drip pads must ensure that the pads are designed, installed, and operated in accordance with one of the following:

(a) All of the applicable requirements of Sections 265.443 (except Section 265.443(a)(4)), 265.444 and 265.445 of this subpart, or

(b) All of the applicable requirements of Sections 265.443 (except Section 265.443(b)), 265.444 and 265.445 of this subpart.

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 treated wood drippage, rain and other waters, or solutions of drippage and water or other wastes to the associated collection system;

(3) Have a curb or berm around the perimeter;

(4) Be impermeable, e.g., concrete pads must be sealed, coated, or covered with an impermeable material such that the entire surface where drippage occurs or may run across is capable of containing such drippage and mixtures of drippage and precipitation, materials, or other wastes, while being routed to an associated collection system.

(i) Have a hydraulic conductivity of less than or equal to $1x10^{-7}$ centimeters per second, e.g., existing concrete drip pads must be sealed, coated, or covered with a surface material with a hydraulic conductivity of less than or equal to $1x10^{-7}$ centimeters per second such that the entire surface where drippage occurs or may run across is capable of containing such drippage and mixtures of drippage and precipitation, materials, or other wastes while being routed to an associated collection system. This surface material must be maintained free of cracks and gaps that could adversely affect its hydraulic conductivity, and the material must be chemically compatible with the preservatives that contact the drip pad. The requirements of this provision apply only to existing drip pads and those drip pads for which the owner or operator elects to comply with Section 265.442(a) instead of Section 265.442(b).

(ii) The owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by an independent, qualified registered professional engineer that attests to the results of the evaluation. The assessment must be reviewed, updated and recertified annually. The evaluation must document the extent to which the drip pad meets the design and operating standards of this section, except for subsection (b).

Note: The requirement that existing drip pads be impermeable. e.g., that drip pads be sealed, coated, or covered with an impermeable material is administratively stayed. The stay will remain in effect until October 30, 1992.

Note: The requirement that new drip pads be impermeable, e.g., that new drip pads be sealed, coated, or covered with an impermeable material is administratively stayed. The stay will remain in effect until further administrative action is taken.

(5) Be of sufficient structural strength and thickness to prevent failure due to physical contact, climatic conditions, the stress of installation, and the stress of daily operations, e.g. variable and moving loads such as vehicle traffic, movement of wood, etc.

Note: EPA will generally consider applicable standards established by professional

organizations generally recognized by industry such as the American Concrete Institute (ACI) and the American Society of Testing Materials (ASTM) in judging the structural integrity requirement of this paragraph.

(b) If an owner/operator elects to comply with Section 265.442(b) instead of Section 265.442(a), the drip pad must have:

(1) A synthetic liner installed below the drip pad that is designed, constructed, and installed to prevent leakage from the drip pad into the adjacent subsurface soil or groundwater or surface water at any time during the active life (including the closure period) of the drip pad. The liner must be constructed of materials that will prevent waste from being absorbed into the liner and to prevent releases into the adjacent subsurface soil or ground water or surface water during the active life of the facility. The liner must be:

(i) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or drip pad leakage to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation (including stresses from vehicular traffic on the drip pad);

(ii) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression or uplift; and

(iii) Installed to cover all surrounding earth that could come in contact with the waste or leakage; and

(2) A leakage detection system immediately above the liner that is designed, constructed, maintained and operated to detect leakage from the drip pad. The leakage detection system must be:

(i) Constructed of materials that are:

(A) Chemically resistant to the waste managed in the drip pad and the leakage that might be generated; and

(B) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying materials and by any equipment used at the drip pad; and

(ii) Designed and operated to function without clogging through the scheduled closure of the drip pad.

(iii) Designed so that it will detect the failure of the drip pad or the presence of a release of hazardous waste or accumulated liquid at the earliest practicable time.

(3) A leakage collection system immediately above the liner that is designed, constructed, maintained and operated to collect leakage from the drip pad such that it can be removed from below the drip pad. The date, time, and quantity of any leakage collected in this system and removed must be documented in the operating log.

(c) Drip pads must be maintained such that they remain free of cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the drip pad.

Note: See Section 265.443(m) for remedial action required if deterioration or leakage is detected.

(d) The drip pad and associated collection system must be designed and operated to convey, drain, and collect liquid resulting from drippage or precipitation in order to prevent run-off.

(e) Unless protected by a structure, as described in Section 265.440(b) of this subpart, the owner or operator must design, construct, operate and maintain a run-on control system capable of preventing flow onto the drip pad during peak discharge from at least a 24-hour, 25-year storm, unless the system has sufficient excess capacity to contain any run-on that might enter the system, or the drip pad is protected by a structure or cover, as described in Section 265.440(b) of this subpart.

(f) Unless protected by a structure or cover, as described in Section 265.440(b) of this subpart, the owner or operator must design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(g) The drip pad must be evaluated to determine that it meets the requirements of paragraphs (a) through (f) of this section and the owner or operator must obtain a statement from an independent, qualified registered professional engineer certifying that the drip pad design meets the requirements of this section.

(h) Drippage and accumulated precipitation must be removed from the associated collection system as necessary to prevent overflow onto the drip pad.

(i) The drip pad surface must be cleaned thoroughly in a manner and frequency such that accumulated residues of hazardous waste or other materials are removed, with residues being properly managed as hazardous waste, so as to allow weekly inspections of the entire drip pad surface without interference or hindrance from accumulated residues of hazardous waste or other materials on the drip pad. The owner or operator must document the date and time of each cleaning and the cleaning procedure used in the facility's operating log.

(j) Drip pads must be operated and maintained in a manner to minimize tracking of hazardous waste or hazardous waste constituents off the drip pad as a result of activities by personnel or equipment.

(k) After being removed from the treatment vessel, treated wood from pressure and non-pressure processes must be held on the drip pad until drippage has ceased. The owner or operator must maintain records sufficient to document that all treated wood is held on the pad following treatment in accordance with this requirement.

(l) Collection and holding units associated with run-on and run-off control systems must be emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system.

(m) Throughout the active life of the drip pad, if the owner or operator detects a condition that may have caused or has caused a release of hazardous waste, the condition must be repaired within a reasonably prompt period of time following discovery, in accordance with the following procedures:

(1) Upon detection of a condition that may have caused or has caused a release of hazardous waste (e.g., upon detection of leakage by the leak detection system), the owner or operator must:

(i) Enter a record of the discovery in the facility operating log;

(ii) Immediately remove the portion of the drip pad affected by the condition from service;

(iii) Determine what steps must be taken to repair the drip pad, remove any leakage from below the drip pad, and establish a schedule for accomplishing the clean up and repairs;

(iv) Within 24 hours after discovery of the condition, notify the Regional Administrator of the condition and, within 10 working days, provide written notice to the Regional Administrator with a description of the steps that will be taken to repair the drip pad, and clean up any leakage, and the schedule for accomplishing this work.

(2) The Regional Administrator will review the information submitted, make a determination regarding whether the pad must be removed from service completely or partially until repairs and clean up are complete, and notify the owner or operator of the determination and the underlying rationale in writing.

(3) Upon completing all repairs and clean up, the owner or operator must notify the Regional Administrator in writing and provide a certification, signed by an independent, qualified registered professional engineer, that the repairs and clean up have been completed according to the written plan submitted in accordance with paragraph (m)(1)(iv) of this section.

(n) The owner or operator must maintain, as part of the facility operating log, documentation of past operating and waste handling practices. This must include identification of preservative formulations used in the past, a description of drippage management practices, and a description of treated wood storage and handling practices.

265.444 Inspections

(a) During construction or installation, liners and cover systems (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections (e.g. holes, cracks, thin spots, or foreign materials). Immediately after construction or installation, liners must be inspected and certified as meeting the requirements of Section 265.443 of this Subpart by an independent qualified, registered professional engineer. The certification must be maintained at the facility as part of the facility operating record. After installation liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters.

(b) While a drip pad is in operation, it must be inspected weekly and after storms to detect evidence of any of the following:

(1) Deterioration, malfunctions or improper operation of run-on and run-off control systems;

(2) The presence of leakage in and proper functioning of leak detection system.

(3) Deterioration or cracking of the drip pad surface.

Note: See Section 265.443(m) for remedial action required if deterioration or leakage is detected.

265.445 Closure.

(a) At closure, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (pad, liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leakage, and manage them as hazardous waste.

(b) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in paragraph (a) of this section, the owner or operator finds that not all contaminated subsoils can be practically removed or decontaminated, he must close the facility and perform post-closure care in accordance with closure and post-closure care requirements that apply to landfills (Section 265.310). For permitted units, the requirement to have a permit continues throughout the post-closure period.

(c) (1) The owner or operator of an existing drip pad, as defined in Section 265.400 of this subpart, that does not comply with the liner requirements of Section 265.443(b)(1) must:

(i) Include in the closure plan for the drip pad under Section 265.112 both a plan for complying with paragraph (a) of this section and a contingent plan for complying with paragraph (b) of this section in case not all contaminated subsoils can be practicably removed at closure; and

(ii) Prepare a contingent post-closure plan under Section 265.118 of this part for complying with paragraph (b) of this section in case not all contaminated subsoils can be practicably removed at closure.

(2) The cost estimates calculated under Sections 265.112 and 265.144 of this part for closure and post-closure care of a drip pad subject to this paragraph must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under paragraph (a) of this section.

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(s) 40 CFR 265.1030 through 265.1049 (Subpart AA), "Air Emission Standards for Process Vents", are incorporated by reference including subsequent amendments and editions.

SUBPART AA - AIR EMISSION STANDARDS FOR PROCESS VENTS

265.1030 Applicability.

(a) The regulations in this subpart apply to owners and operators of facilities that treat, store or dispose of hazardous wastes (except as provided in Section 265.1).

(b) Except for Sections 265.1034, paragraphs (d) and (e), this subpart applies to process 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, if these operations are conducted in one of the following:
  (1) A unit that is subject to the permitting requirements of 40 CFR part 270, or
  (2) A unit (including a hazardous waste recycling unit) that is not exempt from permitting under the provisions of 40 CFR 262.34(a) (i.e., a hazardous waste recycling unit that is not a 90-day tank or container) and that is located at a hazardous waste management facility otherwise subject to the permitting requirements of 40 CFR part 270, or
  (3) A unit that is exempt from permitting under the provisions of 40 CFR 262.34(a) (i.e., a 90-day tank or container).

[Note: The requirements of Sections 265.1032 through 265.1036 apply to process vents on hazardous waste recycling units previously exempt under paragraph 261.6(c)(1). Other exemptions under Sections 261.4, and 265.1(c) are not affected by these requirements]

265.1031 Definitions

As used in this subpart, all terms shall have the meaning given them in Section 264.1031, the Act, and parts 260-266.

265.1032 Standards: Process vents.

(a) The owner or 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) Reduce total organic emissions from all affected process vents at the facility below 1.4 kg/h (3 lb/h) and 2.8 Mg/yr (3.1 tons/yr), or
  (2) Reduce by use of a control device, total organic emissions from all affected process vents at the facility by 95 weight percent.

(b) If the owner or operator installs a closed-vent system and control device to comply with the provisions of paragraph (a) of this section the closed vent system and control device must meet the requirements of Section 265.1033.

(c) Determinations of vent emissions and emission reductions or total organic compound concentrations achieved by add-on control devices may be based on engineering calculations or performance tests. If performance tests are used to determine vent emissions, emission reductions, or total organic compound concentrations achieved by add-on control devices, the performance tests must conform with the requirements of Section 265.1034(c)

(d) When an owner or operator and the Regional Administrator do not agree on determinations of vent emissions and/or emission reductions or total organic compound concentrations achieved by add-on control devices based on engineering calculations, the test methods in Section 265.1034(c) shall be used to resolve the disagreement.

265.1033 Standards: Closed-vent systems and control devices.

(a) (1) Owners and operators of closed-vent systems and control devices used to comply with provisions of this part shall comply with the provisions of this section.
  (2) The owner or operator of an existing facility who cannot install a closed-vent system and control device to comply with the provisions of this subpart on the effective date that the facility becomes subject to the

provisions of this subpart must prepare an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The controls must be installed as soon as possible, but the implementation schedule may allow up to 30 months after the effective date that the facility becomes subject to this subpart for installation and startup. All units that begin operation after December 21, 1990, must comply with the rules immediately (i.e. must have control devices installed and operating on startup of the affected unit); the 2-year implementation schedule does not apply to these units.

(b) A control device involving vapor recovery (e.g., a condenser or adsorber) shall be designed and operated to recover the organic vapors vented to it with an efficiency of 95 weight percent or greater unless the total organic emission limits of Section 265.1032(a)(1) for all affected process vents can be attained at an efficiency less than 95 weight percent.

(c) An enclosed combustion device (e.g. a vapor incinerator, boiler, or process heater) shall be designed and operated to reduce the organic emissions vented to it by 95 weight percent or greater; to achieve a total organic compound concentration of 20 ppmv. expressed as the sum of the actual compounds, not carbon equivalents, on a dry basis corrected to 3 percent oxygen; or to provide a minimum residence time of 0.50 seconds at a minimum temperature of 760 degrees Celsius. If a boiler or process heater is used as the control device, then the vent stream shall be introduced into the flame zone of the boiler or process heater.

(d) (1) A flare shall be designed for and operated with no visible emissions as determined by the methods specified in paragraph (e)(1) of this section, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.

(2) A flare shall be operated with a flame present at all times, as determined by the methods specified in paragraph (f)(2)(iii) of this section.

(3) A flare shall be used only if the net heating value of the gas being combusted is 11.2 MJ/Scm (300 Btu/scf) or greater, if the flare is steam-assisted or air-assisted; or if the net heating value of the gas being combusted is 7.45 MJ/scm (200 Btu/scf) or greater if the flare is nonassisted. The net heating value of the gas being combusted shall be determined by the methods specified in paragraph (e)(2) of this section.

(4) (i) A steam-assisted or nonassisted flare shall be designed for and operated with an exit velocity, as determined by the methods specified in paragraph (e)(3) of this section, less than 18.3 m/s (60 ft/s), except as provided in paragraphs (d)(4)(ii) and (iii) of this section.

(ii) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in paragraph (e)(3) of this section, equal to or greater than 18.3 m/s (60 ft/s) but less than 122 m/s (400 ft/s) is allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).

(iii) A steam-assisted or nonassisted flare designed for and operated with an exit velocity, as determined by the methods specified in paragraph (e)(3) of this section, less than the velocity, V_{max}, as determined by the method specified in paragraph (e)(4) of this section and less than 122 m/s (400 ft/s) is allowed.

(5) An air-assisted flare shall be designed and operated with an exit velocity less than the velocity, V_{max}, as determined by the method specified in paragraph (e)(5) of this section.

(6) A flare used to comply with this section shall be steam-assisted, air-assisted, or nonassisted.

(e) (1) Reference Method 22 in 40 CFR part 60 shall be used to determine the compliance of a flare with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22.

(2) The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \left[\sum_{i=1}^{n} C_i H_i \right]$$

where:

H_T = Net heating value of the sample, MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 degrees Celsius and 760 mm Hg, but the standard temperature for determining the volume corresponding to 1 mol is 20 degrees Celsius;

K = Constant, 1.74×10^{-7} (1/ppm) (g mol/scm) (MJ/kcal) where standard temperature for (g mol/scm) is 20 degrees Celsius;

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 in 40 CFR part 60 and measured for hydrogen and carbon monoxide by ASTM D 1946-82 (incorporated by reference as specified in Section 260.11); and

H_i = Net heat of combustion of sample component i, kcal/9 mol at 25 degrees Celsius and 760 mm Hg. The heats of combustion may be determined using ASTM D 2382-83 (incorporated by reference as specified in Section 260.11) if published values are not available or cannot be calculated.

(3) The actual exit velocity of a flare shall be determined by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Reference Methods 2, 2A, 2C, or 2D in 40 CFR part 60 as appropriate, by the unobstructed (free) cross-sectional area of the flare tip.

(4) The maximum allowed velocity in m/s, V_{max}, for a flare complying with paragraph (d)(4)(iii) of this section shall be determined by the following equation:

$$Log_{10}(V_{max}) = (H_T + 28.8)/31.7$$

where:
H_T The net heating value as determined in paragraph (e)(2) of this section.

28.8 = Constant,
31.7 = Constant,

(5) The maximum allowed velocity in m/s, V_{max}, for an air-assisted flare shall be determined by the following equation:

$$V_{max} = 8.706 + 0.7084\ (H_T)$$

where:
8.706 = Constant,
0.7084 = Constant,

H_T = The net heating value as determined in paragraph (e)(2) of this section.

(f) The owner or operator shall monitor and inspect each control device required to comply with this section to ensure proper operation and maintenance of the control device by implementing the following requirements:

(1) Install, calibrate, maintain and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow from each affected process vent to the control device at least once every hour. The flow indicator sensor shall be installed in the vent stream at the nearest feasible point to the control device inlet but before being combined with other vent streams.

(2) Install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor control device operation as specified below:

(i) For a thermal vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of ± 1 Percent of the temperature being monitored in °C or ±0.5°C, whichever is greater. The temperature sensor shall be installed at a location in the combustion chamber downstream of the combustion zone.

(ii) For a catalytic vapor incinerator, a temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature at two locations and have an accuracy of ±1 percent of the temperature being monitored in °C or ±0.5 °C, whichever is greater. One temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed inlet and a second temperature sensor shall be installed in the vent stream at the nearest feasible point to the catalyst bed outlet.

(iii) For a flare, a heat sensing monitoring device equipped with a continuous recorder that indicates the continuous ignition of the pilot flame.

(iv) For a boiler or process heater having a design heat input capacity less than 44 MW, a temperature monitoring device equipped with a continuous recorder. The device shall have an accuracy of ±1 percent of the temperature being monitored in °C or ±0.5 °C, whichever is greater. The temperature sensor shall be installed at a location in the furnace downstream of the combustion zone.

(v) For a boiler or process heater having a design heat input capacity greater than or equal to 44 MW, a monitoring device equipped with a continuous recorder to measure a parameter(s) that indicates good combustion operating practices are being used.

(vi) For a condenser, either:

(A) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the condenser, or

(B) A temperature monitoring device equipped with a continuous recorder. The device shall be capable of monitoring temperature with an accuracy of ± 1 percent of the temperature being monitoring in degrees Celsius (°C) or ± 0.5 °C, whichever is greater. The temperature sensor shall be installed at a location in the exhaust vent stream from the condenser exit (i.e., product side).

(vii) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly in the control device, either:

(A) A monitoring device equipped with a continuous recorder to measure the concentration level of the organic compounds in the exhaust vent stream from the carbon bed, or

(B) A monitoring device equipped with a continuous recorder to measure a parameter that indicates the carbon bed is regenerated on a regular predetermined time cycle.

(3) Inspect the readings from each monitoring device required by paragraphs (f)(1) and (2) of this section at least once each operating day to check control device operation and, if necessary, immediately implement the corrective measures necessary to ensure the control device operates in compliance with the requirements of this section.

(g) An owner or operator using a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device, shall replace the existing carbon in the control device with fresh carbon at a regular, predetermined time interval that is no longer than the carbon service life established as a requirement of Section 265.1035(b)(4(iii(F).

(h) An owner or operator using a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device shall replace the existing carbon in the control device with fresh carbon on a regular basis by using one of the following procedures:

(1) Monitor the concentration level of the organic compounds in the exhaust vent stream from the carbon adsorption system on a regular schedule, and replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated. The monitoring frequency shall be daily or at an interval no greater than 20 percent of the time required to consume the total carbon working capacity established as a requirement of Section 265.1035(b)(4(iii)(G), whichever is longer.

(2) Replace the existing carbon with fresh carbon at a regular, predetermined time interval that is less than the design carbon replacement interval established as a requirement of Section 265.1035(b)(4)(iii)(G).

(i) An owner or operator of an affected facility seeking to comply with the provisions of this part by using a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system is required to develop documentation including sufficient information to describe the control device operation and identify the process parameter or parameters that indicate proper operation and maintenance of the control device.

(j) A closed-vent system shall meet either of the following design requirements:

(1) A closed-vent system shall be designed to operate with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background as determined by the procedure in Section 265.1034(b) of this subpart, and by visual inspections; or

(2) A closed-vent system shall be designed to operate at a pressure below atmospheric pressure. The system shall be equipped with a least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the control device is operating.

(3) Detectable emissions, as indicated by an instrument reading greater than 500 ppm and visual inspections, shall be controlled as soon as practicable, but not later than 15 calendar days after the emission is detected.

(4) A first attempt at repair shall be made no later than 5 calendar days after the emission is detected.

(k) The owner or operator shall monitor and inspect each closed-vent system required to comply with this section to ensure proper operation and maintenance of the closed-vent system by implementing the following requirements:

(1) Each closed-vent system that is used to comply with paragraph (j)(1) of this section shall be inspected and monitored in accordance with the following requirements:

(i) An initial leak detection monitoring of the closed-vent system shall be conducted by the owner or operator on or before the date that the system becomes subject to this section. The owner or operator shall monitor the closed-vent system components and connections using the procedures specified in Sec. 265.1034(b) of this subpart to demonstrate that the closed-vent system operates with no detectable emissions, as indicated by an instrument reading of less than 500 ppmv above background.

(ii) After initial leak detection monitoring required in paragraph (k)(1)(i) of this section, the owner or operator shall inspect and monitor the closed-vent system as follows:

(A) Closed-vent system joints, seams, or other connections that are permanently or semi-permanently sealed (e.g., a welded joint between two sections of hard piping or a bolted and gasketed ducting flange) shall be visually inspected at least once per year to check for defects that could result in air pollutant emissions. The owner or operator shall monitor a component or connection using the procedures specified in Sec. 265.1034(b) of this subpart to demonstrate that it operates with no detectable emissions following any time the component is repaired or replaced (e.g., a section of damaged hard piping is replaced with new hard piping) or the connection is unsealed (e.g., a flange is unbolted).

(B) Closed-vent system components or connections other than those specified in paragraph (k)(1)(ii)(A) of this section shall be monitored annually and at other times as requested by the Regional Administrator, except as provided for in paragraph (n) of this section, using the procedures specified in Sec. 265.1034(b) of this subpart to demonstrate that the components or connections operate with no detectable emissions.

(iii) In the event that a defect or leak is detected, the owner or operator shall repair the defect or leak in accordance with the requirements of paragraph (k)(3) of this section.

(iv) The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in Sec. 265.1035 of this subpart.

(2) Each closed-vent system that is used to comply with paragraph (j)(2) of this section shall be inspected and monitored in accordance with the following requirements:

(i) The closed-vent system shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in ductwork or piping or loose connections.

(ii) The owner or operator shall perform an initial inspection of the closed-vent system on or before the date that the system becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year.

(iii) In the event that a defect or leak is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (k)(3) of this section.

(iv) The owner or operator shall maintain a record of the inspection and monitoring in accordance with the requirements specified in Sec. 265.1035 of this subpart.

(3) The owner or operator shall repair all detected defects as follows:

(i) Detectable emissions, as indicated by visual inspection, or by an instrument reading greater than 500 ppmv above background, shall be controlled as soon as practicable, but not later than 15 calendar days after the emission is detected, except as provided for in paragraph (k)(3)(iii) of this section.

(ii) A first attempt at repair shall be made no later than 5 calendar days after the emission is detected.

(iii) Delay of repair of a closed-vent system for which leaks have been detected is allowed if the repair is technically infeasible without a process unit shutdown, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be completed by the end of the next process unit shutdown.

(iv) The owner or operator shall maintain a record of the defect repair in accordance with the requirements specified in Sec. 265.1035 of this subpart.

(l) Closed-vent systems and control devices used to comply with provisions of this subpart shall be operated at all times when emissions may be vented to them.

(m) The owner or operator using a carbon adsorption system to control air pollutant emissions shall document that all carbon that is a hazardous waste and that is removed from the control device is managed in one of the following manners, regardless of the average volatile organic concentration of the carbon:

(1) Regenerated or reactivated in a thermal treatment unit that meets one of the following:

(i) The owner or operator of the unit has been issued a final permit under 40 CFR part 270 which implements the requirements of 40 CFR part 264 subpart X; or

(ii) The unit is equipped with and operating air emission controls in accordance with the applicable requirements of subparts AA and CC of either this part or of 40 CFR part 264; or

(iii) The unit is equipped with and operating air emission controls in accordance with a national emission standard for hazardous air pollutants under 40 CFR part 61 or 40 CFR part 63.

(2) Incinerated in a hazardous waste incinerator for which the owner or operator either:

(i) Has been issued a final permit under 40 CFR part 270 which implements the requirements of 40 CFR part 264, subpart O; or

(ii) Has designed and operates the incinerator in accordance with the interim status requirements of subpart O of this part.

(3) Burned in a boiler or industrial furnace for which the owner or operator either:
  (i) Has been issued a final permit under 40 CFR part 270 which implements the requirements of 40 CFR part 266, subpart H; or
  (ii) Has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of 40 CFR part 266, subpart H.

(n) Any components of a closed-vent system that are designated, as described in Sec. 265.1035(c)(9) of this subpart, as unsafe to monitor are exempt from the requirements of paragraph (k)(1)(ii)(B) of this section if:
  (1) The owner or operator of the closed-vent system determines that the components of the closed-vent system are unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (k)(1)(ii)(B) of this section; and
  (2) The owner or operator of the closed-vent system adheres to a written plan that requires monitoring the closed-vent system components using the procedure specified in paragraph (k)(1)(ii)(B) of this section as frequently as practicable during safe-to-monitor times.

265.1034 Test methods and procedures.

(a) Each owner or operator subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section.

(b) When a closed-vent system is tested for compliance with no detectable emissions, as required in Section 265.1033(k) of this subpart, the test shall comply with the following requirements:
  (1) Monitoring shall comply with Reference Method 21 in 40 CFR part 60.
  (2) The detection instrument shall meet the performance criteria of Reference Method 21.
  (3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.
  (4) Calibration gases shall be:
    (i) Zero air (less than 10 ppm of hydrocarbon in air).
    (ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.
  (5) The background level shall be determined as set forth in Reference Method 21.
  (6) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.
  (7) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(c) Performance tests to determine compliance with Section 265.1032(a) and with the total organic compound concentration limit of Section 265.1033(c) shall comply with the following:
  (1) Performance tests to determine total organic compound concentrations and mass flow rates entering and exiting control devices shall be conducted and data reduced in accordance with the following reference methods and calculation procedures:
    (i) Method 2 in 40 CFR part 60 for velocity and volumetric flow rate.
    (ii) Method 18 in 40 CFR part 60 for organic content.
    (iii) Each performance test shall consist of three separate runs; each run conducted for at least 1 hour under the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. For the purpose of determining total organic compound concentrations and mass flow rates, the average of results of all runs shall apply. The average shall be computed on a time-weighted basis.
    (iv) Total organic mass flow rates shall be determined by the following equation:

$$E_h = Q_{sd} \left[\sum_{i=1}^{n} C_i MW_i \right] [0.0416] [10^{-6}]$$

where:

E_h = Total organic mass flow rate, kg/h;

Q_{sd} = Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h;

n = Number of organic compounds in the vent gas;

C_i = Organic concentration in ppm, dry basis, of compound i in the vent gas, as determined by Method 18;

MW_i = Molecular weight of organic compound i in the vent gas, kg/kg-mol;

0.0416 = Conversion factor for molar volume, kg-mol/m^3(@293 K and 760 mm Hg);

10^{-6} = Conversion from ppm, ppm^{-1}.

(v) The annual total organic emission rate shall be determined by the following equation:

$$E_A = (E_h)(H)$$

where:

E_A = Total organic mass emission rate, kg/y;

E_h = Total organic mass flow rate for the process vent, kg/h;

H = Total annual hours of operations for the affected unit, h.

(vi) Total organic emissions from all affected process vents at the facility shall be determined by summing the hourly total organic mass emission rates (E_h, as determined in paragraph (c)(1)(v) of this section) and by summing the annual total organic mass emission rates (E_A, as determined in paragraph (c)(1)(v) of this section) for all affected process vents at the facility.

(2) The owner or operator shall record such process information as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test.

(3) The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for the test methods specified in paragraph (c)(1) of this section.

(ii) Safe sampling platform(s).

(iii) Safe access to sampling platform(s).

(iv) Utilities for sampling and testing equipment.

(4) For the purpose of making compliance determinations, the time-weighted average of the results of the three runs shall apply: In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances beyond the owner or operator's control, compliance may, upon the Regional Administrator's approval, be determined using the average of the results of the two other runs.

(d) To show that a process vent associated with a hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation is not subject to the requirements of this subpart, the owner or operator must make an initial determination that the time-weighted, annual average total organic concentration of the waste managed by the waste management unit is less than 10 ppmw using one of the following two methods:

(1) Direct measurement of the organic concentration of the waste using the following procedures:

(i) The owner or operator must take a minimum of four grab samples of waste for each waste stream managed in the affected unit under process conditions expected to cause the maximum waste organic concentration.

(ii) For waste generated onsite, the grab samples must be collected at a point before the waste is exposed to the atmosphere such as in an enclosed pipe or other closed system that is used to transfer the waste after generation to the first affected distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation. For waste generated offsite,

the grab samples must be collected at the inlet to the first waste management unit that receives the waste provided the waste has been transferred to the facility in a closed system such as a tank truck and the waste is not diluted or mixed with other waste.

(iii) Each sample shall be analyzed and the total organic concentration of the sample shall be computed using Method 9060 or 8240 of SW-846 (incorporated by reference under Section 260.11).

(iv) The arithmetic mean of the results of the analyses of the four samples shall apply for each waste stream managed in the unit in determining the time-weighted, annual average total organic concentration of the waste. The time-weighted average is to be calculated using the annual quantity of each waste stream processed and the mean organic concentration of each waste stream managed in the unit.

(2) Using knowledge of the waste to determine that its total organic concentration is less than 10 ppmw. Documentation of the waste determination is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has preciously been demonstrated by direct measurement to generate a waste stream having a total organic content less than 10 ppmw, or prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.

(e) The determination that distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations manage hazardous wastes with time-weighted, annual average total organic concentrations less than 10 ppmw shall be made as follows:

(1) By the effective date that the facility becomes subject to the provisions of this subpart or by the date when the waste is first managed in a waste management unit, whichever is later, and

(2) For continuously generated waste, annually; or

(3) Whenever there is a change in the waste being managed or a change in the process that generates or treats the waste.

(f) When an owner or operator and the Regional Administrator do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation manages a hazardous waste with organic concentrations of at least 10 ppmw based on knowledge of the waste, the procedures in Method 8240 may be used to resolve the dispute.

265.1035 Recordkeeping requirements.

(a) (1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one hazardous waste management unit subject to the provisions of this subpart may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

(b) Owners and operators must record the following information in the facility operating record:

(1) For facilities that comply with the provisions of Section 265.1033(a)(2), an implementation schedule that includes dates by which the closed-vent system and control device will be installed and in operation. The schedule must also include a rationale of why the installation cannot be completed at an earlier date. The implementation schedule must be in the facility operating record by the effective date that the facility becomes subject to the provisions of this subpart.

(2) Up-to-date documentation of compliance with the process vent standards in Section 265.1032, including:

(i) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility (i.e., the total emissions for all affected vents at the facility), and the approximate location within the facility of each affected unit (e.g., identify the hazardous waste management units on a facility plot plan); and

(ii) Information and data supporting determinations of vent emissions and emission reductions achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, determinations of vent emissions and emission reductions must be made using operating parameter values (e.g., temperatures, flow rates, or vent stream organic compounds and concentrations) that represent the conditions that result in maximum organic emissions, such as when the waste management unit is operating at the highest load or capacity level reasonably expected to occur. If the owner or operator takes any action (e.g., managing a waste of different composition or increasing operating hours of affected waste management units) that would result in an increase in total organic emissions from affected process vents at the facility, then a new determination is required.

(3) Where an owner or operator chooses to use test data to determine the organic removal efficiency or total organic compound concentration achieved by the control device, a performance test plan. The test plan must include:

(i) A description of how it is determined that the planned test is going to be conducted when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur. This shall include the estimated or design flow rate and organic content of each vent stream and define the acceptable operating ranges of key process and control device parameters during the test program.

(ii) A detailed engineering description of the closed-vent system and control device including:
(A) Manufacturer's name and model number of control device.
(B) Type of control device.
(C) Dimensions of the control device.
(D) Capacity.
(E) Construction materials.

(iii) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(4) Documentation of compliance with Section 265.1033 shall include the following information:

(i) A list of all information references and sources used in preparing the documentation.

(ii) Records, including the dates, of each compliance test required by Section 265.1033(j)

(iii) If engineering calculations are used a design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions" (incorporated by reference as specified in Section 260.11) or other engineering texts acceptable to the Regional Administrator that present basic control device design information.

Documentation provided by the control device manufacturer or vendor that describes the control device design in accordance with paragraphs (b)(4)(iii)(A) through (b)(4)(iii)(G) of this section may be used to comply with this requirement. The design analysis shall address the vent stream characteristics and control device operation parameters as specified below.

(A) For a thermal vapor incinerator, and design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

(B) For a catalytic vapor incinerator, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(C) For a boiler or process heater, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also establish the design minimum and average flame zone temperatures, combustion zone residence time, and description of method and location where the vent stream is introduced into the combustion zone.

(D) For a flare, the design analysis shall consider the vent stream composition, constituent concentrations, and flow rate. The design analysis shall also consider the requirements specified in Section 265.1033(d).

(E) For a condenser, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic compound concentration level, design average temperature of the condenser exhaust vent stream, and design average temperatures of the coolant fluid at the condenser inlet and outlet.

(F) For a carbon adsorption system such as a fixed-bed adsorber that regenerates the carbon bed directly onsite in the control device, the design analysis shall consider the vent stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design exhaust vent stream organic compound concentration level, number and capacity of carbon beds, type and working capacity of activated carbon used for carbon beds, design total stream flow over the period of each complete carbon bed regeneration cycle, duration of the carbon bed steaming and cooling/drying cycles, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon.

(G) For a carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device, the design analysis shall consider the vent

stream composition, constituent concentrations, flow rate, relative humidity, and temperature. The design analysis shall also establish the design outlet organic concentration level, capacity of carbon bed, type and working capacity of activated carbon used for carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

(iv) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur.

(v) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of 95 percent or greater unless the total organic concentration limit of Section 265.1032(a) is achieved at an efficiency less than 95 weight percent or the total organic emission limits of Section 265.1032(a) for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than 95 weight percent. A statement provided by the control device manufacturer or vendor certifying that the control equipment meets the design specifications may be used to comply with this requirement.

(vi) If performance tests are used to demonstrate compliance, all test results.

(c) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of this part shall be recorded and kept up-to-date in the facility operating record. The information shall include:

(1) Description and date of each modification that is made to the closed-vent system or control device design.

(2) Identification of operating parameter, description of monitoring device, and diagram of monitoring sensor location or locations used to comply with Section 265.1033(f)(1) and (f)(2).

(3) Monitoring, operating, and inspection information required by paragraphs (f) through (k) of Section 265.1033 of this subpart.

(4) Date, time, and duration of each period that occurs while the control device is operating when any monitored parameter exceeds the value established in the control device design analysis as specified below:

(i) For a thermal vapor incinerator designed to operate with a minimum residence time of 0.50 second at a minimum temperature of 760 degrees Celsius period when the combustion temperature is below 760 degrees Celsius.

(ii) For a thermal vapor incinerator designed to operate with an organic emission reduction efficiency of 95 weight percent or greater period, when the combustion zone temperature is more than 28 degrees Celsius below the design average combustion zone temperature established as a requirement of paragraph (b)(4)(iii)A) of this section

(iii) For a catalytic vapor incinerator, period when:

(A) Temperature of the vent stream at the catalyst bed inlet is more than 28 degrees Celsius below the average temperature of the inlet vent stream established as a requirement of paragraph (b)(4)(iii)(B) of this section, or

(B) Temperature difference across the catalyst bed is less than 80 percent of the design average temperature difference established as a requirement of paragraph (b)(4)(iii)(B) of this section.

(iv) For a boiler or process heater, period when:

(A) Flame zone temperature is more than 28 degrees Celsius below the design average flame zone temperature established as a requirement of paragraph (b)(4)(iii)(C) of this section; or

(B) Position changes where the vent stream is introduced to the combustion zone from the location established as a requirement of paragraph (b)(4)(iii)(C) of this section.

(v) For a flare, period when the pilot flame is not ignited.

(vi) For a condenser that complies with Section 265.1033(f)(2)(vi)(A), period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the condenser are more than 20 percent greater than the design outlet organic compound concentration level established as requirement of paragraph (b)(4)(iii)(E) of this section.

(vii) For a condenser that complies with Section 265.1033(f)(2)(vi)(B), period when:

(A) Temperature of the exhaust vent stream from the condenser is more than 6 degrees Celsius above the design average exhaust vent stream temperature established as a requirement of paragraph (b)(4)(iii)(E) of this section; or

(B) Temperature of the coolant fluid exiting the condenser is more than 6 degrees Celsius above the design average coolant fluid temperature at the condenser outlet established as a requirement of paragraph (b)(4)(iii)(E) of this section.

(viii) For a carbon adsorption system such as a fixed-bed carbon adsorber that

regenerates the carbon bed directly onsite in the control device and complies with Section 265.1033(f)(2)(vii)(A), period when the organic compound concentration level or readings of organic compounds in the exhaust vent stream from the carbon bed are more than 20 percent greater than the design exhaust vent stream organic compound concentration level established as a requirement of paragraph (b)(4)(iii)(F) of this section.

(ix) For a carbon adsorption system such as a fixed-bed carbon adsorber that regenerates the carbon bed directly onsite in the control device and complies with Section 265.1033(f)(2)(vii)(B), period when the vent stream continues to flow through the control device beyond the predetermined carbon bed regeneration time established as a requirement of paragraph (b)(4)(iii)(F) of this section.

(5) Explanation for each period recorded under paragraph (c)(4) of this section of the cause for control device operating parameter exceeding the design value and the measures implemented to correct the control device operation.

(6) For a carbon adsorption system operated subject to requirements specified in Section 265.1033(g) or Section 265.1033(h)(2), date when existing carbon in the control device is replaced with fresh carbon.

(7) For a carbon adsorption system operated subject to requirements specified in Section 265.1033(h)(1), a log that records:

(i) Date and time when control device is monitored for carbon breakthrough and the monitoring device reading.

(ii) Date when existing carbon in the control device is replaced with fresh carbon.

(8) Date of each control device startup and shutdown.

.(9) An owner or operator designating any components of a closed-vent system as unsafe to monitor pursuant to Sec. 265.1033(n) of this subpart shall record in a log that is kept in the facility operating record the identification of closed-vent system components that are designated as unsafe to monitor in accordance with the requirements of Sec. 265.1033(n) of this subpart, an explanation for each closed-vent system component stating why the closed-vent system component is unsafe to monitor, and the plan for monitoring each closed-vent system component.

(10) When each leak is detected as specified in Sec. 265.1033(k) of this subpart, the following information shall be recorded:

(i) The instrument identification number, the closed-vent system component identification number, and the operator name, initials, or identification number.

(ii) The date the leak was detected and the date of first attempt to repair the leak.

(iii) The date of successful repair of the leak.

(iv) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A after it is successfully repaired or determined to be nonrepairable.

(v) ``Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(A) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(B) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked on-site before depletion and the reason for depletion.

(d) Records of the monitoring, operating, and inspection information required by paragraphs (c)(3) through (c)(10) of this section shall be maintained by the owner or operator for at least 3 years following the date of each occurrence, measurement, maintenance, corrective action, or record.

(e) 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 record.

(f) Up-to-date information and data used to determine whether or not a process vent is subject to the requirements in Section 265.1032 including supporting documentation as required by Section 265.1034(d)(2) when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used, shall be recorded in a log that is kept in the facility operating record.

265.1036-265.1049 [Reserved

(t) 40 CFR 265.1050 through 265.1079 (Subpart BB), "Air Emission Standards for Equipment Leaks" are incorporated by reference including subsequent amendments and editions.

SUBPART BB - AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS

265.1050 Applicability.

(a) The regulations in this subpart apply to owners and operators of facilities that treat, store, or dispose of hazardous wastes (except as provided in Section 265.1).
(b) Except as provided in Section 265.1064(k), this subpart applies to equipment that contains or contacts hazardous wastes with organic concentrations of at least 10 percent by weight that are managed in one of the following:
  (1) A unit that is subject to the permitting requirements of 40 CFR part 270, or
  (2) A unit (including a hazardous waste recycling unit) that is not exempt from permitting under the provisions of 40 CFR 262.34(a) (i.e., a hazardous waste recycling unit that is not a 90-day tank or container) and that is located at a hazardous waste management facility otherwise subject to the permitting requirements of 40 CFR part 270, or
  (3) A unit that is exempt from permitting under the provisions of 40 CFR 262.34(a) (i.e., a 90-day tank or container).
(c) Each piece of equipment to which this subpart applies shall be marked in such a manner that it can be distinguished readily from other pieces of equipment.
(d) Equipment that is in vacuum service is excluded from the requirements of Section 265.1052 to Section 265.1060 if it is identified as required in Section 265.1064(g)(5).
(e) Equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for a period of less than 300 hours per calendar year is excluded from the requirements of Section 265.1052 through Section 265.1060 of this subpart if it is identified as required in Section 265.1064(g)(6) of this subpart.

[Note: The requirements of Sections 265.1052 through 265.1064 apply to equipment associated with hazardous waste recycling units previously exempt under paragraph 261.6(c)(1). Other exemptions under Sections 261.4, and 265.1(c) are not affected by these requirements.]

265.1051 Definitions.

(a) As used in this subpart, all terms shall have the meaning given them in Section 264.1031, the Act, and parts 260-266.

265.1052 Standards: Pumps in light liquid service.

(a) (1) Each pump in light liquid service shall be monitored monthly to detect leaks by the methods specified in Section 265.1063(b), except as provided in paragraphs (d), (e), and (f) of this section.
  (2) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal.
(b) (1) If a instrument reading of 10,000 ppm or greater is measured, a leak is detected.
  (2) If there are indications of liquids dripping from the pump seal, a leak is detected.
(c) (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 265.1059.
  (2) A first attempt at repair (e.g., tightening the packing gland) shall be made no later than 5 calendar days after each leak is detected.
(d) Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of paragraph (a), provided the following requirements are met:
  (1) Each dual mechanical seal system must be:
    (i) Operated with the barrier fluid at a pressure that is at all times greater than the pump-stuffing box pressure, or
    (ii) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the requirements of Section 265.1060, or

(iii) Equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to the atmosphere.

(2) The barrier fluid system must not be a hazardous waste with organic concentrations 10 percent or greater by weight.

(3) Each barrier fluid system must be equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(4) Each pump must be checked by visual inspection, each calendar week, for indications of liquids dripping from the pump seals.

(5) (i) Each sensor as described in paragraph (d)(3) of this section must be checked daily or be equipped with an audible alarm that must be checked monthly to ensure that it is functioning properly.

(ii) The owner or operator must determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(6) (i) If there are indications of liquids dripping from the pump seal or the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined in paragraph (d)(5)(ii) of this section, a leak is detected.

(ii) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 265.1059.

(iii) A first attempt at repair (e.g., relapping the seal) shall be made no later than 5 calendar days after each leak is detected.

(e) Any pump that is designated, as described in Section 265.1064(g)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraphs (a), (c), and (d) of this section if the pump mee' the following requirements:

(1) Must have no externally actuated shaft p netrating the pump housing.

(2) Must operate with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background as measured by the methods specified in Section 265.1063(c).

(3) Must be tested for compliance with paragraph (e)(2 of this section initially upon designation, annually, and at other times as requested by the Regional Administrator.

(f) If any pump is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals to a control device that complies with the requirements of Section 265.1060, it is exempt from the requirements of paragraphs (a) through (e) of this section.

265.1053 Standards: Compressors.

(a) Each compressor shall be equipped with a seal system that includes a barrier fluid system and that prevents leakage of total organic emissions to the atmosphere, except as provided in paragraphs (h) and (i) of this section.

(b) Each compressor seal system as required in paragraph (a) of this section shall be:

(1) Operated with the barrier fluid at a pressure that is at all times greater than the compressor stuffing box pressure, or

(2) Equipped with a barrier fluid system that is connected by a closed-vent system to a control device that complies with the requirements of Section 265.1060, or

(3) Equipped with a system that purges the barrier fluid into a hazardous waste stream with no detectable emissions to atmosphere.

(c) The barrier fluid must not be a hazardous waste with organic concentrations 10 percent or greater by weight.

(d) Each barrier fluid system as described in paragraphs (a) through (c) of this section shall be equipped with a sensor that will detect failure of the seal system, barrier fluid system, or both.

(e) (1) Each sensor as required in paragraph (d) of this section shall be checked daily or shall be equipped with an audible alarm that must be checked monthly to ensure that it is functioning properly unless the compressor is located within the boundary of an unmanned plant site, in which case the sensor must be checked daily.

(2) The owner or operator shall determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both.

(f) If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under paragraph (e)(2) of this section, a leak is detected.

(g) (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 265.1059.

(2) A first attempt at repair (e.g., tightening the packing gland) shall be made no later than 5 calendar days after each leak is detected.

(h) A compressor is exempt from the requirements of paragraphs (a) and (b) of this section if it is equipped with a closed-vent system capable of capturing and transporting any leakage from the seal to a control device that complies with the requirements of Section 265.1060, except as provided in paragraph (i) of this section.

(i) Any compressor that is designated, as described in Section 265.1064(g)(2), for no detectable emissions as indicated by an instrument reading of less than 500 ppm above background is exempt from the requirements of paragraphs (a) through (h) of this section if the compressor:
  (1) Is determined to be operating with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Section 265.1063(c).
  (2) Is tested for compliance with paragraph (i)(1) of this section initially upon designation, annually, and at other times as requested by the Regional Administrator.

265.1054 Standards: Pressure relief devices in gas/vapor service.

(a) Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Section 265.1063(c).
(b) (1) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in Section 265.1059.
  (2) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the condition of no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in Section 265.1063(c).
(c) Any pressure relief device that is equipped with a closed-vent system capable of capturing and transporting leakage from the pressure relief device to a control device as described in Section 265.1060 is exempt from the requirements of paragraphs (a) and (b) of this section.

265.1055 Standards: Sampling connecting systems.

(a) Each sampling connection system shall be equipped with a closed-purge, closed-loop, closed-vent system. This system shall collect the sample purge for return to the process or for routing to the appropriate treatment system. Gases displaced during filling of the sample container are not required to be collected or captured.
(b) Each closed-purge, closed-loop, or closed-vent system as required in paragraph (a) of this section shall:
  (1) Return the purged process fluid directly to the process line; or
  (2) Collect and recycle the purged process fluid; or
  (3) Be designed and operated to capture and transport all the purged process fluid to a waste management unit that complies with the applicable requirements of Section 265.1085 through Section 265.1087 of this subpart or a control device that complies with the requirements of Section 265.1060 of this subpart.
(c) *In situ* sampling systems and sampling systems without purges are exempt from the requirements of paragraphs (a) and (b) of this section.

265.1056 Standards: Open-ended valves or lines.

(a) (1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve.
  (2) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring hazardous waste stream flow through the open-ended valve or line.
(b) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the hazardous waste stream end is closed before the second valve is closed.
(c) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (a) of this section at all other times.

265.1057 Standards: Valves in gas/vapor service or in light liquid service.

(a) Each valve in gas/vapor or light liquid service shall be monitored monthly to detect leaks by the methods specified in Section 265.1063(b) and shall comply with paragraphs (b) through (e) of this section, except as provided in paragraphs (f), (g), and (h) of this section, and Sections 265.1061 and 265.1062.
(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
(c) (1) Any valve for which a leak is not detected for two successive months may be monitored the first month of every succeeding quarter, beginning with the next quarter, until a leak is detected.

(2) If a leak is detected, the valve shall be monitored monthly until a leak is not detected for two successive months.

(d) (1) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in Section 265.1059.

(2) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(e) First attempts at repair include, but are not limited to, the following best practices where practicable:

(1) Tightening of bonnet bolts.

(2) Replacement of bonnet bolts.

(3) Tightening of packing gland nuts.

(4) Injection of lubricant into lubricated packing.

(f) Any valve that is designated, as described in Section 265.1064(g)(2), for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, is exempt from the requirements of paragraph (a) of this section if the valve:

(1) Has no external actuating mechanism in contact with the hazardous waste stream.

(2) Is operated with emissions less than 500 ppm above background as determined by the method specified in Section 265.1063(c).

(3) Is tested for compliance with paragraph (f)(2) of this section initially upon designation, annually, and at other times as requested by the Regional Administrator.

(g) Any valve that is designated, as described in Section 265.1064(h)(1), as an unsafe-to-monitor valve is exempt from the requirements of paragraph (a) of this section if:

(1) The owner or operator of the valve determines that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (a) of this section.

(2) The owner or operator of the valve adheres to a written plan that requires monitoring of the valve as frequently as practicable during safe-to-monitor times.

(h) Any valve that is designated, as described in Section 265.1064(h)(2), a difficult to monitor valve is exempt from the requirements of paragraph (a) of this section if:

(1) The owner or operator of the valve determines that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface.

(2) The hazardous waste management unit within which the valve is located was in operation before June 21, 1990.

(3) The owner or operator of the valve follows a written plan that requires monitoring of the valve at least once per calendar year.

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) Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors shall be monitored within 5 days by the method specified in Section 265.1063(b) if evidence of a potential leak is found by visual, audible, olfactory, or any other detection method.

(b) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.

(c) (1) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected, except as provided in Section 265.1059.

(2) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(d) First attempts at repair include, but are not limited to, the best practices described under Section 265.1057(e).

(e) Any connector that is inaccessible or is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined) is exempt from the monitoring requirements of paragraph (a) of this section and from the recordkeeping requirements of Section 265.1064 of this subpart.

265.1059 Standards: Delay of repair.

(a) Delay of repair of equipment for which leaks have been detected will be allowed if the repair is technically infeasible without a hazardous waste management unit shutdown. In such a case, repair of this equipment shall occur before the end of the next hazardous waste management unit shutdown.

(b) Delay of repair of equipment for which leaks have been detected will be allowed for equipment that is isolated from the hazardous waste management unit and that does not continue to contain or contact hazardous waste with organic concentrations at least 10 percent by weight.

(c) Delay of repair for valves will be allowed if:

(1) The owner or operator determines that emissions of purged material resulting from immediate repair are greater than the emissions likely to result from delay of repair.
(2) When repair procedures are affected, the purged material is collected and destroyed or recovered in a control device complying with Section 265.1060.

(d) Delay of repair for pumps will be allowed if:
(1) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system.
(2) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.

(e) Delay of repair beyond a hazardous waste management unit shutdown will be allowed for a valve if valve assembly replacement is necessary during the hazardous waste management unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next hazardous waste management unit shutdown will not be allowed unless the next hazardous waste management unit shutdown occurs sooner than 6 months after the first hazardous waste management unit shutdown.

265.1060 Standards: Closed-vent systems and control devices.

Owners or operators of closed-vent systems and control devices shall comply with the provisions of Section 265.1033.

265.1061 Alternative standards for valves in gas/vapor service or in light liquid service: percentage of valves allowed to leak.

(a) An owner or operator subject to the requirements of Section 265.1057 may elect to have all valves within a hazardous waste management unit comply with an alternative standard that allows no greater than 2 percent of the valves to leak.

(b) The following requirements shall be met if an owner or operator decides to comply with the alternative standard of allowing 2 percent of valves to leak:
(1) An owner or operator must notify the Regional Administrator that the owner or operator has elected to comply with the requirements of this section.
(2) A performance test as specified in paragraph (c) of this section shall be conducted initially upon designation, annually, and at other times requested by the Regional Administrator.
(3) If a valve leak is detected, it shall be repaired in accordance with Section 265.1057(d) and (e).

(c) Performance tests shall be conducted in the following manner:
(1) All valves subject to the requirements in Section 265.1057 within the hazardous waste management unit shall be monitored within 1 week by the methods specified in Section 265.1063(b).
(2) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected.
(3) The leak percentage shall be determined by dividing the number of valves subject to the requirements in Section 265.1057 for which leaks are detected by the total number of valves subject to the requirements in Section 265.1057 within the hazardous waste management unit.

(d) If an owner or operator decides to comply with this section no longer, the owner or operator must notify the Regional Administrator in writing that the work practice standard described in Section 265.1057(a) through (e) will be followed.

265.1062 Alternative standards for valves in gas/vapor service or in light liquid service: skip period leak detection and repair.

(a) (1) An owner or operator subject to the requirements of Section 265.1057 may elect for all valves within a hazardous waste management unit to comply with one of the alternative work practices specified in paragraphs (b) (2) and (3) of this section.
(2) An owner or operator must notify the Regional Administrator before implementing one of the alternative work practices.

(b) (1) An owner or operator shall comply with the requirements for valves, as described in Section 265.1057, except as described in paragraphs (b)(2) and (b)(3) of this section.
(2) After two consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2 percent, an owner or operator may begin to skip one of the quarterly leak detection periods for the valves subject to the requirements in Section 265.1057.
(3) After five consecutive quarterly leak detection periods with the percentage of valves leaking equal to or less than 2 percent, an owner or operator may begin to skip three of the quarterly leak detection periods for the valves subject to the requirements in Section 265.1057.

(4) If the percentage of valves leaking is greater than 2 percent, the owner or operator shall monitor monthly in compliance with the requirements in Section 265.1057, but may again elect to use this section after meeting the requirements of Section 265.1057(c)(1).

265.1063 Test methods and procedures.

(a) Each owner or operator subject to the provisions of this subpart shall comply with the test methods and procedures requirements provided in this section.

(b) Leak detection monitoring, as required in Sections 265.1052-265.1062, shall comply with the following requirements:
   (1) Monitoring shall comply with Reference Method 21 in 40 CFR part 60.
   (2) The detection instrument shall meet the performance criteria of Reference Method 21.
   (3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Reference Method 21.
   (4) Calibration gases shall be:
      (i) Zero air (less than 10 ppm of hydrocarbon in air).
      (ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.
   (5) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.

(c) When equipment is tested for compliance with no detectable emissions, as required in Sections 265.1052(e), 265.1053(i), 265.1054, and 265.1057(f), the test shall comply with the following requirements:
   (1) The requirements of paragraphs (b)(1) through (4) of this section shall apply.
   (2) The background level shall be determined as set forth in Reference Method 21.
   (3) The instrument probe shall be traversed around all potential leak interfaces as close to the interface as possible as described in Reference Method 21.
   (4) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared with 500 ppm for determining compliance.

(d) In accordance with the waste analysis plan required by Section 265.13(b), an owner or operator of a facility must determine, for each piece of equipment, whether the equipment contains or contacts a hazardous waste with organic concentration that equals or exceeds 10 percent by weight using the following:
   (1) Methods described in ASTM Methods D 2267-88, E 169-87, E 168-88, E 260-85 (incorporated by reference under Section 260.11);
   (2) Method 9060 or 8240 of SW-846 (incorporated by reference under Section 260.11); or
   (3) Application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced. Documentation of a waste determination by knowledge is required. Examples of documentation that shall be used to support a determination under this provision include production process information documenting that no organic compounds are used, information that the waste is generated by a process that is identical to a process at the same or another facility that has preciously been demonstrated by direct measurement to have a total organic content less than 10 percent, or prior speciation analysis results on the same waste stream where it can also be documented that no process changes have occurred since that analysis that could affect the waste total organic concentration.

(e) If an owner or operator determines that a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10 percent by weight, the determination can be revised only after following the procedures in paragraph (d)(1) or (d)(2) of this section.

(f) When an owner or operator and the Regional Administrator do not agree on whether a piece of equipment contains or contacts a hazardous waste with organic concentrations at least 10 percent by weight, the procedures in paragraph (d)(1) or (d)(2) of this section can be used to resolve the dispute.

(g) Samples used in determining the percent organic content shall be representative of the highest total organic content hazardous waste that is expected to be contained in or contact the equipment.

(h) To determine if pumps or valves are in light liquid service, the vapor pressures of constituents may be obtained from standard reference texts or may be determined by ASTM D-2879-86 (incorporated by reference under Section 260.11).

(i) Performance tests to determine if a control device achieves 95 weight percent organic emission reduction shall comply with the procedures of Section 265.1034(c)(1) through (c)(4).

265.1064 Recordkeeping requirements.

(a) (1) Each owner or operator subject to the provisions of this subpart shall comply with the recordkeeping requirements of this section.

(2) An owner or operator of more than one hazardous waste management unit subject to the provisions of this subpart may comply with the recordkeeping requirements for these hazardous waste management units in one recordkeeping system if the system identifies each record by each hazardous waste management unit.

(b) Owners and operators must record the following information in the facility operating record:

(1) For each piece of equipment to which Subpart BB of Part 265 applies:

(i) Equipment identification number and hazardous waste management unit identification.

(ii) Approximate locations within the facility (e.g. identify the hazardous waste management unit on a facility plot plan).

(iii) Type of equipment (e.g., a pump or pipeline valve).

(iv) Percent-by-weight total organics in the hazardous waste stream at the equipment.

(v) Hazardous waste state at the equipment (e.g., gas/vapor or liquid).

(vi) Method of compliance with the standard (e.g., "monthly leak detection and repair" or "equipped with dual mechanical seals").

(2) For facilities that comply with the provisions of Section 265.1033(a)(2), an implementation schedule as specified in Section 265.1033(a)(2).

(3) Where an owner or operator chooses to use test data to demonstrate the organic removal efficiency or total organic compound concentration achieved by the control device a performance test plan as specified in Section 265.1035(b)(3).

(4) Documentation of compliance with Section 265.1060, including the detailed design documentation or performance test results specified in Section 265.1035(b)(4).

(c) When each leak is detected as specified in Sections 265.1052, 265.1053, 265.1057, and 265.1058, the following requirements apply:

(1) A weatherproof and readily visible identification, marked with the equipment identification number, the date evidence of a potential leak was found in accordance with Section 265.1058(a), and the date the leak was detected, shall be attached to the leaking equipment.

(2) The identification on equipment, except on a valve, may be removed after it has been repaired.

(3) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in Sections 265.1057(c) and no leak has been detected during those 2 months.

(d) When each leak is detected as specified in Sections 265.1052, 265.1053, 265.1057, and 265.1058, the following information shall be recorded in an inspection log and shall be kept in the facility operating record:

(1) The instrument and operator identification numbers and the equipment identification number.

(2) The date evidence of a potential leak was found in accordance with Section 265.1058(a).

(3) The date the leak was detected and the dates of each attempt to repair the leak.

(4) Repair methods applied in each attempt to repair the leak.

(5) "Above 10,000" if the maximum instrument reading measured by the methods specified in Section 265.1063(b) after each repair attempt is equal to or greater than 10,000 ppm.

(6) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(7) Documentation supporting the delay of repair of a valve in compliance with Section 265.1059(c).

(8) The signature of the owner or operator (or designate) whose decision it was that repair could not be affected without a hazardous waste management unit shutdown.

(9) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.

(10) The date of successful repair of the leak.

(e) Design documentation and monitoring, operating, and inspection information for each closed-vent system and control device required to comply with the provisions of Section 265.1060 shall be recorded and kept up-to-date in the facility operating record as specified in Section 265.1035(c). Design documentation is specified in Section 265.1035(c)(1) and (c)(2) and monitoring, operating, and inspection information in Section 265.1035(c)(3)-(c)(8).

(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 record.

(g) The following information pertaining to all equipment subject to the requirements in Sections 265.1052 through 265.1060 shall 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 the requirements of this subpart.

(2) (i) A list of identification numbers for equipment that the owner or operator elects to designate for no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, under the provisions of Sections 265.1052(e), 265.1053(i), and 265.1057(f).

(ii) The designation of this equipment as subject to the requirements of Sections 265.1052(e), 265.1053(i), or 265.1057(f) shall be signed by the owner or operator.

(3) A list of equipment identification numbers for pressure relief devices required to comply with Section 265.1054(a).

(4) (i) The dates of each compliance test required in Sections 265.1052(e), 265.1053(i), 265.1054, and 265.1057(f).

(ii) The background level measured during each compliance test.

(iii) The maximum instrument reading measured at the equipment during each compliance test.

(5) A list of identification numbers for equipment in vacuum service.

(6) Identification, either by list or location (area or group) of equipment that contains or contacts hazardous waste with an organic concentration of at least 10 percent by weight for a period of less than 300 hours per year.

(h) The following information pertaining to all valves subject to the requirements of Section 265.1057(g) and (h) shall be recorded in a log that is kept in the facility operating record:

(1) A list of identification numbers for valves that are designated as unsafe to monitor, an explanation for each valve stating why the valve is unsafe to monitor, and the plan for monitoring each valve.

(2) A list of identification numbers for valves that are designated as difficult to monitor, an explanation for each valve stating why the valve is difficult to monitor, and the planned schedule for monitoring each valve.

(i) The following information shall be recorded in the facility operating record for valves complying with Section 265.1062.

(1) A schedule of monitoring.

(2) The percent of valves found leaking during each monitoring period.

(j) The following information shall be recorded in a log that is kept in the facility operating record:

(1) Criteria required in Section 265.1052(e)(5)(ii) and Section 265.1053(e)(2) and an explanation of the design criteria.

(2) Any changes to these criteria and the reasons for the changes.

(k) The following information shall 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 this subpart and other specific subparts:

(1) An analysis determining the design capacity of the hazardous waste management unit.

(2) A statement listing the hazardous waste influent to and effluent from each hazardous waste management unit subject to the requirements in Sections 265.1052 through 265.1060 and an analysis determining whether these hazardous wastes are heavy liquids.

(3) An up-to-date analysis and the supporting information and data used to determine whether or not equipment is subject to the requirements in Sections 265.1052 through 265.1060. The record shall include supporting documentation as required by Section 265.1063(d)(3) when application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced is used. If the owner or operator takes any action (e.g., changing the process that produced the waste) that could result in an increase in the total organic content of the waste contained in or contacted by equipment determined not to be subject to the requirements in Sections 265.1052 through 265.1060, then a new determination is required.

(l) Records of the equipment leak information required by paragraph (d) of this section and the operating information required by paragraph (e) of this section need be kept only 3 years.

(m) The owner or operator of any facility that is subject to this subpart and to regulations at 40 CFR part 60, subpart V V, or 40 CFR part 61, subpart V, may elect to determine compliance with this subpart by documentation either pursuant to Section 265.1064 of this subpart, or pursuant to those provisions of 40 CFR part 60 or 61, to the extent that the documentation under the regulation at 40 CFR part 60 or part 61 duplicates the documentation required under this subpart. The documentation under the regulation at 40 CFR part 60 or part 61 shall be kept with or made readily available with the facility operating record.

265.1065-265.1079 (Reserved)

(u) 40 CFR 265.1080 through 265.1091 (Subpart CC), "Air Emission Standards for Tanks, Surface Impoundments, and Containers", are incorporated by reference including subsequent amendments and editions.

SUBPART CC - AIR EMISSION STANDARDS FOR TANKS, SURFACE IMPOUNDMENTS, AND CONTAINERS

265.1080 Applicability.

(a) The requirements of this subpart apply to owners and operators of all facilities that treat, store, or dispose of hazardous waste in tanks, surface impoundments, or containers subject to either subparts I, J, or K of this part except as Section 265.1 and paragraph (b) of this section provide otherwise.

(b) The requirements of this subpart do not apply to the following waste management units at the facility:

(1) A waste management unit that holds hazardous waste placed in the unit before October 6, 1996, and in which no hazardous waste is added to the unit on or after this date.

(2) A container that has a design capacity less than or equal to $0.1m^3$.

(3) A tank in which an owner or operator has stopped adding hazardous waste and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan.

(4) A surface impoundment in which an owner or operator has stopped adding hazardous waste (except to implement an approved closure plan) and the owner or operator has begun implementing or completed closure pursuant to an approved closure plan.

(5) A waste management unit that is used solely for on-site treatment or storage of hazardous waste that is generated as the result of implementing remedial activities required under the RCRA corrective action authorities of 3004(u), 3004(v) or 3008(h), CERCLA authorities, or similar Federal or State authorities.

(6) A waste management unit that is used solely for the management of radioactive mixed waste in accordance with all applicable regulations under the authority of the Atomic Energy Act and the Nuclear Waste Policy Act.

(7) A hazardous waste management unit that the owner or operator certifies is equipped with and operating air emission controls in accordance with the requirements of an applicable Clean Air Act regulation codified under 40 CFR part 60, part 61, or part 63. For the purpose of complying with this paragraph, a tank for which the air emission control includes an enclosure, as opposed to a cover, must be in compliance with the enclosure and control device requirements of Sec. 265.1085(i), except as provided in Sec. 265.1083(c)(5).

(8) A tank that has a process vent as defined in 40 CFR 264.1031.

(c) For the owner and operator of a facility subject to this subpart who has received a final permit under RCRA section 3005 prior to October 6, 1996, the following requirements apply:

(1) The requirements of 40 CFR part 264, subpart CC shall be incorporated into the permit when the permit is reissued in accordance with the requirements of 40 CFR 124.15 or reviewed in accordance with the requirements of 40 CFR 270.50(d).

(2) Until the date when the permit is reissued in accordance with the requirements of 40 CFR 124.15 or reviewed in accordance with the requirements of 40 CFR 270.50(d), the owner and operator is subject to the requirements of this subpart.

(d) The requirements of this subpart, except for the recordkeeping requirements specified in Section 265.1090(i) of this subpart, are administratively stayed for a tank or a container used for the management of hazardous waste generated by organic peroxide manufacturing and its associated laboratory operations when the owner or operator of the unit meets all of the following conditions:

(1) The owner or operator identifies that the tank or container receives hazardous waste generated by an organic peroxide manufacturing process producing more than one functional family of organic peroxides or multiple organic peroxides within one functional family, that one or more of these organic peroxides could potentially undergo self-accelerating thermal decomposition at or below ambient temperatures, and that organic peroxides are the predominant products manufactured by the process. For the purpose of meeting the conditions of this paragraph, "organic peroxide" means an organic compound that contains the bivalent O-O- structure and which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.

(2) The owner or operator prepares documentation, in accordance with the requirements of Section 265.1090(i) of this subpart, explaining why an undue safety hazard would be created if air emission controls specified in Sections 265.1085 through 265.1088 of this subpart are installed and operated on the tanks and containers used at the facility to manage the hazardous waste generated by the organic peroxide manufacturing process or processes meeting the conditions of paragraph (d)(1) of this section.

(3) The owner or operator notifies the Regional Administrator in writing that hazardous waste generated by an organic peroxide manufacturing process or processes meeting the conditions of paragraph (d)(1) of this section are managed at the facility in tanks or containers meeting the conditions of paragraph (d)(2) of this section. The notification shall state the name and address of the facility, and be signed and dated by an authorized representative of the facility owner or operator.

265.1081 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given to them in the Act and parts 260 through 266 of this chapter.

Average volatile organic concentration or average VO concentration means the mass-weighted average volatile organic concentration of a hazardous waste as determined in accordance with the requirements of Section 265.1084 of this subpart.

Closure device means a cap, hatch, lid, plug, seal, valve, or other type of fitting that blocks an opening in a cover such that when the device is secured in the closed position it prevents or reduces air pollutant emissions to the atmosphere. Closure devices include devices that are detachable from the cover (e.g., a sampling port cap), manually operated (e.g., a hinged access lid or hatch), or automatically operated (e.g., a spring-loaded pressure relief valve).

Continuous seal means a seal that forms a continuous closure that completely covers the space between the edge of the floating roof and the wall of a tank. A continuous seal may be a vapor-mounted seal, liquid-mounted seal, or metallic shoe seal. A continuous seal may be constructed of fastened segments so as to form a continuous seal.

Cover means a device that provides a continuous barrier over the hazardous waste managed in a unit to prevent or reduce air pollutant emissions to the atmosphere. A cover may have openings (such as access hatches, sampling ports, gauge wells) that are necessary for operation, inspection, maintenance, and repair of the unit on which the cover is used. A cover may be a separate piece of equipment which can be detached and removed from the unit or a cover may be formed by structural features permanently integrated into the design of the unit.

Enclosure means a structure that surrounds a tank or container, captures organic vapors emitted from the tank or container, and vents the captured vapors through a closed-vent system to a control device.

External floating roof means a pontoon type or double-deck type cover that rests on the surface of the material managed in a tank with no fixed roof.

Fixed roof means a cover that is mounted on a unit in a stationary position and does not move with fluctuations in the level of the material managed in the unit.

Floating membrane cover means a cover consisting of a synthetic flexible membrane material that rests upon and is supported by the hazardous waste being managed in a surface impoundment.

Floating roof means a cover that is mounted on a unit in a stationary position and does not move with fluctuations in the level of the material managed in the unit.

Hard-piping means pipe or tubing that is manufactured and properly installed in accordance with relevant standards and good engineering practices.

In light material service means the container is used to manage a material for which both of the following conditions apply: the vapor pressure of one or more of the organic constituents in the material is greater than 0.3 kilopascals (kPa) at 20 deg.C; and the total concentration of the pure organic constituents having a vapor pressure greater than 0.3 kPa at 20 deg.C is equal to or greater than 20 percent by weight.

Internal floating roof means a cover that rests or floats on the material surface (but not necessarily in complete contact with it) inside a tank that has a fixed roof.

Liquid-mounted seal means a foam or liquid-filled primary seal mounted in contact with the hazardous waste between the tank wall and the floating roof continuously around the circumference of the tank.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Maximum organic vapor pressure means the sum of the individual organic constituent partial pressures exerted by the material contained in a tank, at the maximum vapor pressure-causing conditions (i.e., temperature, agitation, pH effects of combining wastes, etc.) reasonably expected to occur in the tank. For the purpose of this subpart, maximum organic vapor pressure is determined using the procedures specified in Sec. 265.1084(c) of this subpart.

Metallic shoe seal means a continuous seal that is constructed of metal sheets which are held vertically against the wall of the tank by springs, weighted levers, or other mechanisms and is connected to the floating roof by braces or other means. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

No detectable organic emissions means no escape of organics to the atmosphere as determined using the procedure specified in Section 265.1084(d) of this subpart.

Point of waste origination means as follows:
(1) When the facility owner or operator is the generator of the hazardous waste, the point of waste origination means the point where a solid waste produced by a system, process, or waste management unit is determined to be a hazardous waste as defined in 40 CFR part 261.
(Note: In this case, this term is being used in a manner similar to the use of the term "point of generation" in air standards established for waste management operations under authority of the Clean Air Act in 40 CFR parts 60, 61, and 63).
(2) When the facility owner and operator are not the generator of the hazardous waste, point of waste origination means the point where the owner or operator accepts delivery or takes possession of the hazardous waste.

Point of waste treatment means the point where a hazardous waste to be treated in accordance with Sec. 265.1083(c)(2) of this subpart exits the treatment process. Any waste determination shall be made before the waste is conveyed, handled, or otherwise managed in a manner that allows the waste to volatilize to the atmosphere.

Safety device means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purpose of this subpart, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the owner or operator based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials.

Single-seal system means a floating roof having one continuous seal. This seal may be vapor-mounted, liquid-mounted, or a metallic shoe seal.

Vapor-mounted seal means a continuous seal that is mounted such that there is a vapor space between the hazardous waste in the unit and the bottom of the seal.

Volatile organic concentration or *VO concentration* means the fraction by weight of the volatile organic compounds contained in a hazardous waste expressed in terms of parts per million (ppmw) as determined by direct measurement or by knowledge of the waste in accordance with the requirements of Sec. 265.1084 of this subpart. For the purpose of determining the VO concentration of a hazardous waste, organic compounds with a Henry's law constant value of at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in the liquid-phase (0.1 Y/X) (which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m\^3) at 25 degrees Celsius must be included. Appendix VI of this subpart presents a list of compounds known to have a Henry's law constant value less than the cutoff level.

Waste determination means performing all applicable procedures in accordance with the requirements of Section 265.1084 of this subpart to determine whether a hazardous waste meets standards specified in this subpart. Examples

of a waste determination include performing the procedures in accordance with the requirements of Section 265.1084 of this subpart to determine the average VO concentration of a hazardous waste at the point of waste origination; the average VO concentration of a hazardous waste at the point of waste treatment and comparing the results to the exit concentration limit specified for the process used to treat the hazardous waste; the organic reduction efficiency and the organic biodegradation efficiency for a biological process used to treat a hazardous waste and comparing the results to the applicable standards; or the maximum volatile organic vapor pressure for a hazardous waste in a tank and comparing the results to the applicable standards.

Waste stabilization process means any physical or chemical process used to either reduce the mobility of hazardous constituents in a hazardous waste or eliminate free liquids as determined by Test Method 9095 (Paint Filter Liquids Test) in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW846, Third Edition, September, 1986, as amended by Update 1, November 15, 1992 (incorporated by reference--refer to Section 260.11 of this chapter). A waste stabilization process includes mixing the hazardous waste with binders or other materials, and curing the resulting hazardous waste and binder mixture. Other synonymous terms used to refer to this process are "waste fixation" or "waste solidification." This does not include the adding of absorbent materials to the surface of a waste, without mixing, agitation, or subsequent curing, to absorb free liquid.

265.1082 Schedule for implementation of air emission standards.

(a) Owners or operators of facilities existing on October 6, 1996, and subject to subparts I, J, and K of this part shall meet the following requirements:
  (1) Install and begin operation of all control equipment required by this subpart by October 6, 1996, except as provided for in paragraph (a)(2) of this section.
  (2) When control equipment required by this subpart cannot be installed and in operation by October 6, 1996, the owner or operator shall:
    (i) Install and begin operation of the control equipment as soon as possible but no later than December 8, 1997.
    (ii) Prepare an implementation schedule that includes the following information: specific calendar dates for award of contracts or issuance of purchase orders for the control equipment, initiation of on-site installation of the control equipment, completion of the control equipment installation, and performance of any testing to demonstrate that the installed equipment meets the applicable standards of this subpart.
    (iii) For facilities subject to the recordkeeping requirements of Section 265.73 of this part, the owner or operator shall enter the implementation schedule specified in paragraph (a)(2)(ii) of this section in the operating record no later than October, 1996.
    (iv) For facilities not subject to Section 265.73 of this part, the owner or operator shall enter the implementation schedule specified in paragraph (a)(2)(ii) of this section in a permanent, readily available file located at the facility no later than October, 1996.

(b) Owners or operators of facilities in existence on the effective date of statutory or regulatory amendments under the Act that render the facility subject to subparts I, J, or K of this part shall meet the following requirements:
  (1) Install and begin operation of all control equipment required by this subpart by the effective date of the amendment except as provided for in paragraph (b)(2) of this section.
  (2) When control equipment required by this subpart cannot be installed and begin operation by the effective date of the amendment, the owner or operator shall:
    (i) Install and operate the control equipment as soon as possible but no later than 30 months after the effective date of the amendment.
    (ii) For facilities subject to the recordkeeping requirements of Section 265.73, enter and maintain the implementation schedule specified in paragraph (a)(2)(ii) of this section in the operating record no later than the effective date of the amendment, or
    (iii) For facilities not subject to Section 265.73, the owner or operator shall enter and maintain the implementation schedule specified in paragraph (a)(2)(ii) of this section in a permanent, readily available file located at the facility site no later than the effective date of the amendment.
(c) The Regional Administrator may elect to extend the implementation date for control equipment at a facility, on a case by case basis, to a date later than December 8, 1997, which special circumstances that are beyond the facility owner's or operator's control delay installation or operation of control equipment and the owner or operator has made all reasonable and prudent attempts to comply with 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 this subpart.

(b) The owner or operator shall control air pollutant emissions from each waste management unit in accordance with standards specified in Sec. 265.1085 through Sec. 265.1088 of this subpart, as applicable to the waste management unit, except as provided for in paragraph (c) of this section.

(c) A tank, surface impoundment, or container is exempt from standards specified in Sec. 265.1085 through Sec. 265.1088 of this subpart, as applicable, provided that the waste management unit is one of the following:

(1) A tank, surface impoundment, or container for which all hazardous waste entering the unit has an average VO concentration at the point of waste origination of less than 500 parts per million by weight (ppmw). The average VO concentration shall be determined using the procedures specified in Sec. 265.1084(a) of this subpart. The owner or operator shall review and update, as necessary, this determination at least once every 12 months following the date of the initial determination for the hazardous waste streams entering the unit.

(2) A tank, surface impoundment, or container for which the organic content of all the hazardous waste entering the waste management unit has been reduced by an organic destruction or removal process that achieves any one of the following conditions:

(i) A process that removes or destroys the organics contained in the hazardous waste to a level such that the average VO concentration of the hazardous waste at the point of waste treatment is less than the exit concentration limit (C^t) established for the process. The average VO concentration of the hazardous waste at the point of waste treatment and the exit concentration limit for the process shall be determined using the procedures specified in Sec. 265.1084(b) of this subpart.

(ii) A process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than 95 percent, and the average VO concentration of the hazardous waste at the point of waste treatment is less than 100 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in Sec. 265.1084(b) of this subpart.

(iii) A process that removes or destroys the organics contained in the hazardous waste to a level such that the actual organic mass removal rate (MR) for the process is equal to or greater than the required organic mass removal rate (RMR) established for the process. The required organic mass removal rate and the actual organic mass removal rate for the process shall be determined using the procedures specified in Sec. 265.1084(b) of this subpart.

(iv) A biological process that destroys or degrades the organics contained in the hazardous waste, such that either of the following conditions is met:

(A) The organic reduction efficiency (R) for the process is equal to or greater than 95 percent, and the organic biodegradation efficiency (R_{bio}) for the process is equal to or greater than 95 percent. The organic reduction efficiency and the organic biodegradation efficiency for the process shall be determined using the procedures specified in Sec. 265.1084(b) of this subpart.

(B) The total actual organic mass biodegradation rate (MR_{bio}) for all hazardous waste treated by the process is equal to or greater than the required organic mass removal rate (RMR). The required organic mass removal rate and the actual organic mass biodegradation rate for the process shall be determined using the procedures specified in Sec. 265.1084(b) of this subpart.

(v) A process that removes or destroys the organics contained in the hazardous waste and meets all of the following conditions:

(A) From the point of waste origination through the point where the hazardous waste enters the treatment process, the hazardous waste is managed continuously in waste management units which use air emission controls in accordance with the standards specified in Sec. 265.1085 through Sec. 265.1088 of this subpart, as applicable to the waste management unit.

(B) From the point of waste origination through the point where the hazardous waste enters the treatment process, any transfer of the hazardous waste is accomplished through continuous hard-piping or other closed system transfer that does not allow exposure of the waste to the atmosphere. The EPA considers a drain system that meets the requirements of 40 CFR part

63, subpart RR--National Emission Standards for Individual Drain Systems to be a closed system.

(C) The average VO concentration of the hazardous waste at the point of waste treatment is less than the lowest average VO concentration at the point of waste origination determined for each of the individual waste streams entering the process or 500 ppmw, whichever value is lower. The average VO concentration of each individual waste stream at the point of waste origination shall be determined using the procedures specified in Sec. 265.1084(a) of this subpart. The average VO concentration of the hazardous waste at the point of waste treatment shall be determined using the procedures specified in Sec. 265.1084(b) of this subpart.

(vi) A process that removes or destroys the organics contained in the hazardous waste to a level such that the organic reduction efficiency (R) for the process is equal to or greater than 95 percent and the owner or operator certifies that the average VO concentration at the point of waste origination for each of the individual waste streams entering the process is less than 10,000 ppmw. The organic reduction efficiency for the process and the average VO concentration of the hazardous waste at the point of waste origination shall be determined using the procedures specified in Sec. 265.1084(b) and Sec. 265.1084(a) of this subpart, respectively.

(vii) A hazardous waste incinerator for which the owner or operator has either:

(A) Been issued a final permit under 40 CFR part 270 which implements the requirements of 40 CFR part 264, subpart O; or

(B) Has designed and operates the incinerator in accordance with the interim status requirements of subpart O of this part.

(viii) A boiler or industrial furnace for which the owner or operator has either:

(A) Been issued a final permit under 40 CFR part 270 which implements the requirements of 40 CFR part 266, subpart H, or

(B) Has designed and operates the boiler or industrial furnace in accordance with the interim status requirements of 40 CFR part 266, subpart H.

(ix) For the purpose of determining the performance of an organic destruction or removal process in accordance with the conditions in each of paragraphs (c)(2)(i) through (c)(2)(vi) of this section, the owner or operator shall account for VO concentrations determined to be below the limit of detection of the analytical method by using the following VO concentration:

(A) If Method 25D in 40 CFR part 60, appendix A is used for the analysis, one-half the blank value determined in the method.

(B) If any other analytical method is used, one-half the limit of detection established for the method.

(3) A tank used for biological treatment of hazardous waste in accordance with the requirements of paragraph (c)(2)(iv) of this section.

(4) A tank, surface impoundment, or container for which all hazardous waste placed in the unit either:

(i) Meets the numerical concentration limits for organic hazardous constituents, applicable to the hazardous waste, as specified in 40 CFR part 268--Land Disposal Restrictions under Table "Treatment Standards for Hazardous Waste" in 40 CFR 268.40; or

(ii) Has been treated by the treatment technology established by EPA for the waste in 40 CFR 268.42(a), or treated by an equivalent method of treatment approved by EPA pursuant to 40 CFR 268.42(b).

(5) A tank used for bulk feed of hazardous waste to a waste incinerator and all of the following conditions are met:

(i) The tank is located inside an enclosure vented to a control device that is designed and operated in accordance with all applicable requirements specified under 40 CFR part 61, subpart FF--National Emission Standards for Benzene Waste Operations for a facility at which the total annual benzene quantity from the facility waste is equal to or greater than 10 megagrams per year;

(ii) The enclosure and control device serving the tank were installed and began operation prior to November 25, 1996; and

(iii) The enclosure is designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, Appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical or electrical equipment; or to direct air flow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" annually.

(d) The Regional Administrator may at any time perform or request that the owner or operator perform a waste determination for a hazardous waste managed in a tank, surface impoundment, or container exempted from using air emission controls under the provisions of this section as follows:

(1) The waste determination for average VO concentration of a hazardous waste at the point of waste origination shall be performed using direct measurement in accordance with the applicable requirements of Sec. 265.1084(a) of this subpart. The waste determination for a hazardous waste at the point of waste treatment shall be performed in accordance with the applicable requirements of Sec. 265.1084(b) of this subpart.

(2) In performing a waste determination pursuant to paragraph (d)(1) of this section, the sample preparation and analysis shall be conducted as follows:

(i) In accordance with the method used by the owner or operator to perform the waste analysis, except in the case specified in paragraph (d)(2)(ii) of this section.

(ii) If the Regional Administrator determines that the method used by the owner or operator was not appropriate for the hazardous waste managed in the tank, surface impoundment, or container, then the Regional Administrator may choose an appropriate method.

(3) In a case when the owner or operator is requested to perform the waste determination, the Regional Administrator may elect to have an authorized representative observe the collection of the hazardous waste samples used for the analysis.

(4) In a case when the results of the waste determination performed or requested by the Regional Administrator do not agree with the results of a waste determination performed by the owner or operator using knowledge of the waste, then the results of the waste determination performed in accordance with the requirements of paragraph (d)(1) of this section shall be used to establish compliance with the requirements of this subpart.

(5) In a case when the owner or operator has used an averaging period greater than 1 hour for determining the average VO concentration of a hazardous waste at the point of waste origination, the Regional Administrator may elect to establish compliance with this subpart by performing or requesting that the owner or operator perform a waste determination using direct measurement based on waste samples collected within a 1-hour period as follows:

(i) The average VO concentration of the hazardous waste at the point of waste origination shall be determined by direct measurement in accordance with the requirements of Sec. 265.1084(a) of this subpart.

(ii) Results of the waste determination performed or requested by the Regional Administrator showing that the average VO concentration of the hazardous waste at the point of waste origination is equal to or greater than 500 ppmw shall constitute noncompliance with this subpart except in a case as provided for in paragraph (d)(5)(iii) of this section.

(iii) For the case when the average VO concentration of the hazardous waste at the point of waste origination previously has been determined by the owner or operator using an averaging period greater than 1 hour to be less than 500 ppmw but because of normal operating process variations the VO concentration of the hazardous waste determined by direct measurement for any given 1-hour period may be equal to or greater than 500 ppmw, information that was used by the owner or operator to determine the average VO concentration of the hazardous waste (e.g., test results, measurements, calculations, and other documentation) and recorded in the facility records in accordance with the requirements of Sec. 265.1084(a) and Sec. 265.1090 of this subpart shall be considered by the Regional Administrator together with the results of the waste determination performed or requested by the Regional Administrator in establishing compliance with this subpart.

265.1084 Waste determination procedures.

(a) Waste determination procedure to determine average volatile organic (VO) concentration of a hazardous waste at the point of waste origination.

(1) An owner or operator shall determine the average VO concentration at the point of waste origination for each hazardous waste placed in a waste management unit exempted under the provisions of Sec. 265.1083(c)(1) of this subpart from using air emission controls in accordance with standards specified in Sec. 265.1085 through Sec. 265.1088 of this subpart, as applicable to the waste management unit.

(2) The average VO concentration of a hazardous waste at the point of waste origination shall be determined using either direct measurement as specified in paragraph (a)(3) of this section or by knowledge as specified in paragraph (a)(4) of this section.

(3) Direct measurement to determine average VO concentration of a hazardous waste at the point of waste origination.

(i) Identification. The owner or operator shall identify and record the point of waste origination for the hazardous waste.

(ii) Sampling. Samples of the hazardous waste stream shall be collected at the point of waste origination in a manner such that volatilization of organics contained in the waste and in the subsequent sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

(A) The averaging period to be used for determining the average VO concentration for the hazardous waste stream on a mass-weighted average basis shall be designated and recorded. The averaging period can represent any time interval that the owner or operator determines is appropriate for the hazardous waste stream but shall not exceed 1 year.

(B) A sufficient number of samples, but no less than four samples, shall be collected for the hazardous waste stream to represent the complete range of compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for the source or process generating the hazardous waste stream. Examples of such normal variations are seasonal variations in waste quantity or fluctuations in ambient temperature.

(C) All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the hazardous waste stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process, and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained on-site in the facility operating records. An example of an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, (incorporated by reference--refer to Sec. 260.11(a) of this chapter), or in Method 25D in 40 CFR part 60, appendix A.

(iii) Analysis. Each collected sample shall be prepared and analyzed in accordance with one or more of the methods listed in paragraphs (a)(3)(iii)(A) through (a)(3)(iii)(I) of this section, including appropriate quality assurance and quality control (QA/QC) checks and use of target compounds for calibration. If Method 25D in 40 CFR part 60, appendix A is not used, then one or more methods should be chosen that are appropriate to ensure that the waste determination accounts for and reflects all organic compounds in the waste with Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m^3] at 25 degrees Celsius. Each of the analytical methods listed in paragraphs (a)(3)(iii)(B) through (a)(3)(iii)(G) of this section has an associated list of approved chemical compounds, for which EPA considers the method appropriate for measurement. If an owner or operator uses EPA Method 624, 625, 1624, or 1625 in 40 CFR part 136, appendix A to analyze one or more compounds that are not on that method's published list, the Alternative Test Procedure contained in 40 CFR 136.4 and 136.5 must be followed. If an owner or operator uses EPA Method 8260(B) or 8270(C) in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, (incorporated by reference--refer to Sec. 260.11(a) of this chapter) to analyze one or more compounds that are not on that method's published list, the procedures in paragraph (a)(3)(iii)(H) of this section must be followed. At the owner's or operator's discretion, the concentration of each individual chemical constituent measured in the waste by a method other than Method 25D may be corrected to the concentration had it been measured using Method 25D by multiplying the measured concentration by the constituent-specific adjustment factor (f_{m25D}) as specified in paragraph (a)(4)(iii) of this section. Constituent-specific adjustment factors (f_{m25D}) can be obtained by contacting the Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711.

(A) Method 25D in 40 CFR part 60, appendix A.

(B) Method 624 in 40 CFR part 136, appendix A.

(C) Method 625 in 40 CFR part 136, appendix A. Perform corrections to the compounds for which the analysis is being conducted based on the "accuracy as recovery" using the factors in Table 7 of the method.

(D) Method 1624 in 40 CFR part 136, appendix A.

(E) Method 1625 in 40 CFR part 136, appendix A.

(F) Method 8260(B) in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, (incorporated by reference--refer to Sec. 260.11(a) of

this chapter). Maintain a formal quality assurance program consistent with the requirements of Method 8260(B). The quality assurance program shall include the following elements:

(1) Documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, preparation, introduction, and analysis steps.

(2) Measurement of the overall accuracy and precision of the specific procedures.

(G) Method 8270(C) in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, (incorporated by reference--refer to Sec. 260.11(a) of this chapter). Maintain a formal quality assurance program consistent with the requirements of Method 8270(C). The quality assurance program shall include the following elements:

(1) Documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, and preparation steps.

(2) Measurement of the overall accuracy and precision of the specific procedures.

(H) Any other EPA standard method that has been validated in accordance with "Alternative Validation Procedure for EPA Waste and Wastewater Methods", 40 CFR part 63, appendix D. As an alternative, other EPA standard methods may be validated by the procedure specified in paragraph (a)(3)(iii)(I) of this section.

(I) Any other analysis method that has been validated in accordance with the procedures specified in Section 5.1 or Section 5.3, and the corresponding calculations in Section 6.1 or Section 6.3, of Method 301 in 40 CFR part 63, appendix A. The data are acceptable if they meet the criteria specified in Section 6.1.5 or Section 6.3.3 of Method 301. If correction is required under section 6.3.3 of Method 301, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 are not required.

(iv) Calculations. The average VO concentration ($\overline{C}$) on a mass-weighted basis shall be calculated by using the results for all samples analyzed in accordance with paragraph (a)(3)(iii) of this section and the following equation:

$$\bar{C} = \frac{1}{Q_T} \times \sum_{i=1}^{n} (Q_i \times C_i)$$

Where:

$\bar{C}$ = Average VO concentration of the hazardous waste at the point of waste origination on a mass-weighted basis, ppmw.

i = Individual sample "i" of the hazardous waste.

n = Total number of samples of the hazardous waste collected (at least 4) for the averaging period (not to exceed 1 year).

Q_i = Mass quantity of hazardous waste stream represented by C_i, kg/hr.

Q_T = Total mass quantity of hazardous waste during the averaging period, kg/hr.

C_i = Measured VO concentration of sample "i" as determined in accordance with the requirements of Sec. 265.1084(a)(3)(iii) of this subpart, ppmw.

(4) Use of owner or operator knowledge to determine average VO concentration of a hazardous waste at the point of waste origination.

(i) Documentation shall be prepared that presents the information used as the basis for the owner's or operator's knowledge of the hazardous waste stream's average VO concentration. Examples of information that may be used as the basis for knowledge include: Material balances for the source or process generating the hazardous waste stream; constituent-specific chemical test data for the hazardous waste stream from previous testing that are still applicable to the current waste stream; previous test data for other locations managing the same type of waste stream; or other knowledge based on information included in manifests, shipping papers, or waste certification notices.

(ii) If test data are used as the basis for knowledge, then the owner or operator shall document the test method, sampling protocol, and the means by which sampling variability and analytical variability are accounted for in the determination of the average VO concentration. For example, an owner or

operator may use organic concentration test data for the hazardous waste stream that are validated in accordance with Method 301 in 40 CFR part 63, appendix A as the basis for knowledge of the waste.

(iii) An owner or operator using chemical constituent-specific concentration test data as the basis for knowledge of the hazardous waste may adjust the test data to the corresponding average VO concentration value which would have been obtained had the waste samples been analyzed using Method 25D in 40 CFR part 60, appendix A. To adjust these data, the measured concentration for each individual chemical constituent contained in the waste is multiplied by the appropriate constituent-specific adjustment factor (f_{m25D}).

(iv) In the event that the Regional Administrator and the owner or operator disagree on a determination of the average VO concentration for a hazardous waste stream using knowledge, then the results from a determination of average VO concentration using direct measurement as specified in paragraph (a)(3) of this section shall be used to establish compliance with the applicable requirements of this subpart. The Regional Administrator may perform or request that the owner or operator perform this determination using direct measurement.

(b) Waste determination procedures for treated hazardous waste.

(1) An owner or operator shall perform the applicable waste determination for each treated hazardous waste placed in a waste management unit exempted under the provisions of Sec. 265.1083(c)(2) of this subpart from using air emission controls in accordance with standards specified in Sec. 265.1085 through Sec. 265.1088 of this subpart, as applicable to the waste management unit.

(2) The owner or operator shall designate and record the specific provision in Sec. 265.1083(c)(2) of this subpart under which the waste determination is being performed. The waste determination for the treated hazardous waste shall be performed using the applicable procedures specified in paragraphs (b)(3) through (b)(9) of this section.

(3) Procedure to determine the average VO concentration of a hazardous waste at the point of waste treatment.

(i) Identification. The owner or operator shall identify and record the point of waste treatment for the hazardous waste.

(ii) Sampling. Samples of the hazardous waste stream shall be collected at the point of waste treatment in a manner such that volatilization of organics contained in the waste and in the subsequent sample is minimized and an adequately representative sample is collected and maintained for analysis by the selected method.

(A) The averaging period to be used for determining the average VO concentration for the hazardous waste stream on a mass-weighted average basis shall be designated and recorded. The averaging period can represent any time interval that the owner or operator determines is appropriate for the hazardous waste stream but shall not exceed 1 year.

(B) A sufficient number of samples, but no less than four samples, shall be collected for the hazardous waste stream to represent the complete range of compositions and quantities that occur during the entire averaging period due to normal variations in the operating conditions for the process treating the hazardous waste stream. Examples of such normal variations are seasonal variations in waste quantity or fluctuations in ambient temperature.

(C) All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the hazardous waste stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process, and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained on-site in the facility operating records. An example of an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846 (incorporated by reference–refer to Sec. 260.11(a) of this chapter), or in Method 25D in 40 CFR part 60, appendix A.

(iii) Analysis. Each collected sample shall be prepared and analyzed in accordance with one or more of the methods listed in paragraphs (b)(3)(iii)(A) through (b)(3)(iii)(I) of this section, including appropriate quality assurance and quality control (QA/QC) checks and use of target compounds for calibration. If Method 25D in 40 CFR part 60, appendix A is not used, then one or more methods should be chosen that are appropriate to ensure that the waste determination accounts for and reflects all organic compounds in the waste with Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole m^3 at 25 degrees Celsius. Each of the analytical methods listed in paragraphs (b)(3)(iii)(B) through (b)(3)(iii)(G) of this section has an associated list of approved chemical compounds, for which EPA considers the method appropriate for measurement. If an owner or operator uses EPA Method 624, 625, 1624, or 1625 in 40 CFR part 136, appendix A

to analyze one or more compounds that are not on that method's published list, the Alternative Test Procedure contained in 40 CFR 136.4 and 136.5 must be followed. If an owner or operator uses EPA Method 8260(B) or 8270(C) in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846 (incorporated by reference--refer to Sec. 260.11(a) of this chapter) to analyze one or more compounds that are not on that method's published list, the procedures in paragraph (b)(3)(iii)(H) of this section must be followed. At the owner's or operator's discretion, the concentration of each individual chemical constituent measured in the waste by a method other than Method 25D may be corrected to the concentration had it been measured using Method 25D by multiplying the measured concentration by the constituent-specific adjustment factor (f_{m25D}) as specified in paragraph (a)(4)(iii) of this section. Constituent-specific adjustment factors (f_{m25D}) can be obtained by contacting the Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711.

(A) Method 25D in 40 CFR part 60, appendix A.

(B) Method 624 in 40 CFR part 136, appendix A.

(C) Method 625 in 40 CFR part 136, appendix A. Perform corrections to the compounds for which the analysis is being conducted based on the "accuracy as recovery" using the factors in Table 7 of the method.

(D) Method 1624 in 40 CFR part 136, appendix A.

(E) Method 1625 in 40 CFR part 136, appendix A.

(F) Method 8260(B) in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, (incorporated by reference--refer to Sec. 260.11(a) of this chapter). Maintain a formal quality assurance program consistent with the requirements of Method 8260(B). The quality assurance program shall include the following elements:

(1) Documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, preparation, introduction, and analysis steps.

(2) Measurement of the overall accuracy and precision of the specific procedures.

(G) Method 8270(C) in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, (incorporated by reference--refer to Sec. 260.11(a) of this chapter). Maintain a formal quality assurance program consistent with the requirements of Method 8270(C). The quality assurance program shall include the following elements:

(1) Documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, preparation, introduction, and analysis steps.

(2) Measurement of the overall accuracy and precision of the specific procedures.

(H) Any other EPA standard method that has been validated in accordance with "Alternative Validation Procedure for EPA Waste and Wastewater Methods", 40 CFR part 63, appendix D. As an alternative, other EPA standard methods may be validated by the procedure specified in paragraph (b)(3)(iii)(I) of this section.

(I) Any other analysis method that has been validated in accordance with the procedures specified in Section 5.1 or Section 5.3, and the corresponding calculations in Section 6.1 or Section 6.3, of Method 301 in 40 CFR part 63, appendix A. The data are acceptable if they meet the criteria specified in Section 6.1.5 or Section 6.3.3 of Method 301. If correction is required under section 6.3.3 of Method 301, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 are not required.

(iv) Calculations. The average VO concentration ($\bar{C}$) on a mass-weighted basis shall be calculated by using the results for all samples analyzed in accordance with paragraph (b)(3)(iii) of this section and the following equation:

$$\bar{C} = \frac{1}{Q_T} \times \sum_{i=1}^{n} (Q_i \times C_i)$$

Where:

$\bar{C}$ = Average VO concentration of the hazardous waste at the point of waste treatment on a mass-weighted basis, ppmw.
i = Individual sample "i" of the hazardous waste.
n = Total number of samples of the hazardous waste collected (at least 4) for the averaging period (not to exceed 1 year).
Q_i = Mass quantity of hazardous waste stream represented by C_i, kg/hr.
Q_T = Total mass quantity of hazardous waste during the averaging period, kg/hr.
C_i = Measured VO concentration of sample "i" as determined in accordance with the requirements of Sec. 265.1084(b)(3)(iii) of this subpart, ppmw.

(4) Procedure to determine the exit concentration limit (C_t) for a treated hazardous waste.

(i) The point of waste origination for each hazardous waste treated by the process at the same time shall be identified.

(ii) If a single hazardous waste stream is identified in paragraph (b)(4)(i) of this section, then the exit concentration limit (C_t) shall be 500 ppmw.

(iii) If more than one hazardous waste stream is identified in paragraph (b)(4)(i) of this section, then the average VO concentration of each hazardous waste stream at the point of waste origination shall be determined in accordance with the requirements of paragraph (a) of this section. The exit concentration limit (C_t) shall be calculated by using the results determined for each individual hazardous waste stream and the following equation:

$$C_t \frac{\sum_{x=1}^{m}\left(Q_x \times \overline{C_x}\right) + \sum_{y=1}^{n}\left(Q_y \times 500 ppmw\right)}{\sum_{x=1}^{m} Q_x + \sum_{y=1}^{n} Q_y}$$

Where: "i"

$\bar{C}_t$ = Exit concentration limit for treated hazardous waste, ppmw.
x = Individual hazardous waste stream "x" that has an average VO concentration less than 500 ppmw at the point of waste origination as determined in accordance with the requirements of Sec. 265.1084(a) of this subpart.
y = Individual hazardous waste stream "y " that has an average VO concentration equal to or greater than 500 ppmw at the point of waste origination as determined in accordance with the requirements of Sec. 265.1084(a) of this subpart.
m = Total number of "x " hazardous waste streams treated by process.
n = Total number of "y " hazardous waste streams treated by process.
Q_x = Annual mass quantity of hazardous waste stream "x," kg/yr.
Q_y = Annual mass quantity of hazardous waste stream "y ", kg/yr.
$\bar{C}_x$ = Average VO concentration of hazardous waste stream "x" at the point of waste origination as determined in accordance with the requirements of Sec. 265.1084(a) of this subpart, ppmw.

(5) Procedure to determine the organic reduction efficiency (R) for a treated hazardous waste.

(i) The organic reduction efficiency (R) for a treatment process shall be determined based on results for a minimum of three consecutive runs.

(ii) All hazardous waste streams entering the treatment process and all hazardous waste streams exiting the treatment process shall be identified. The owner or operator shall prepare a sampling plan for measuring these streams that accurately reflects the retention time of the hazardous waste in the process.

(iii) For each run, information shall be determined for each hazardous waste stream identified in paragraph (b)(5)(ii) of this section using the following procedures:

(A) The mass quantity of each hazardous waste stream entering the process (Q_b) and the mass quantity of each hazardous waste stream exiting the process (Q_a) shall be determined.

(B) The average VO concentration at the point of waste origination of each hazardous waste stream entering the process ($\overline{C}_b$) during the run shall be determined in accordance with the requirements of paragraph (a)(3) of this section. The average VO concentration at the point of waste treatment of each waste stream exiting the process ($\overline{C}_a$) during the run shall be determined in accordance with the requirements of paragraph (b)(3) of this section.

(iv) The waste volatile organic mass flow entering the process (E_b) and the waste volatile organic mass flow exiting the process (E_a) shall be calculated by using the results determined in accordance with paragraph (b)(5)(iii) of this section and the following equations:

$$E_b = \frac{1}{10^6}\sum_{j=1}^{m}\left(Q_{bj} \times \overline{C}_{bj}\right)$$

$$E_a = \frac{1}{10^6}\sum_{j=1}^{m}\left(Q_{aj} \times \overline{C}_{aj}\right)$$

Where:

E_a = Waste volatile organic mass flow exiting process, kg/hr.
E_b = Waste volatile organic mass flow entering process, kg/hr.
m = Total number of runs (at least 3)
j = Individual run "j"
Q_b = Mass quantity of hazardous waste entering process during run "j," kg/hr.
Q_a = Average mass quantity of hazardous waste exiting process during run "j," kg/hr.
C_a = Average VO concentration of hazardous waste exiting process during run "j" as determined in accordance with the requirements of Sec. 265.1084(b)(3) of this subpart, ppmw.
$\overline{C}_b$ = Average VO concentration of hazardous waste entering process during run "j" as determined in accordance with the requirements of Sec. 265.1084(a)(3) of this subpart, ppmw.

(v) The organic reduction efficiency of the process shall be calculated by using the results determined in accordance with paragraph (b)(5)(iv) of this section and the following equation:

$$R = \frac{E_b - E_a}{E_b} \times 100\%$$

Where:

R = Organic reduction efficiency, percent.
E_b = Waste volatile organic mass flow entering process as determined in accordance with the requirements of paragraph (b)(5)(iv) of this section, kg/hr.
E_a = Waste volatile organic mass flow exiting process as determined in accordance with the requirements of paragraph (b)(5)(iv) of this section, kg/hr.

(6) Procedure to determine the organic biodegradation efficiency (R_{bio}) for a treated hazardous waste.

(i) The fraction of organics biodegraded (F_{bio}) shall be determined using the procedure specified in 40 CFR part 63, appendix C of this chapter.

(ii) The R_{bio} shall be calculated by using the following equation:

$$R_{bio} = F_{bio} \times 100\%$$

Where:

R_{bio} = Organic biodegradation efficiency, percent.
F_{bio} = Fraction of organic biodegraded as determined in accordance with the requirements of paragraph (b)(6)(i) of this section.

(7) Procedure to determine the required organic mass removal rate (RMR) for a treated hazardous waste.

(i) All of the hazardous waste streams entering the treatment process shall be identified.

(ii) The average VO concentration of each hazardous waste stream at the point of waste origination shall be determined in accordance with the requirements of paragraph (a) of this section.

(iii) For each individual hazardous waste stream that has an average VO concentration equal to or greater than 500 ppmw at the point of waste origination, the average volumetric flow rate and the density of the hazardous waste stream at the point of waste origination shall be determined.

(iv) The RMR shall be calculated by using the average VO concentration, average volumetric flow rate, and density determined for each individual hazardous waste stream, and the following equation:

$$RMR = \sum_{y=1}^{n}\left[V_y \times k_y \times \frac{(\overline{C_y} - 500\ ppmw)}{10^6}\right]$$

Where:

RMR = Required organic mass removal rate, kg/hr.
y = Individual hazardous waste stream "y " that has an average VO concentration equal to or greater than 500 ppmw at the point of waste origination as determined in accordance with the requirements of Sec. 265.1084(a) of this subpart.
n = Total number of "y" hazardous waste streams treated by process.
V_y = Average volumetric flow rate of hazardous waste stream "y" at the point of waste origination, m^3/hr.
k_y = Density of hazardous waste stream "y," kg/m^3

$\overline{C_y}$ = Average VO concentration of hazardous waste stream "y" at the point of waste origination as determined in accordance with the requirements of Sec. 265.1084(a) of this subpart, ppmw.

(8) Procedure to determine the actual organic mass removal rate (MR) for a treated hazardous waste.

(i) The MR shall be determined based on results for a minimum of three consecutive runs. The sampling time for each run shall be 1 hour.

(ii) The waste volatile organic mass flow entering the process (E_b) and the waste volatile organic mass flow exiting the process (E_a) shall be determined in accordance with the requirements of paragraph (b)(5)(iv) of this section.

(iii) The MR shall be calculated by using the mass flow rate determined in accordance with the requirements of paragraph (b)(8)(ii) of this section and the following equation:

$$MR = E_b - E_a$$

Where:

MR = Actual organic mass removal rate, kg/hr.
E_b = Waste volatile organic mass flow entering process as determined in accordance with the requirements of paragraph (b)(5)(iv) of this section, kg/hr.
E_a = Waste volatile organic mass flow exiting process as determined in accordance with the requirements of paragraph (b)(5)(iv) of this section, kg/hr.

(9) Procedure to determine the actual organic mass biodegradation rate (MR_{bio}) for a treated hazardous waste.

(i) The MR_{bio} shall be determined based on results for a minimum of three consecutive runs. The sampling time for each run shall be 1 hour.

(ii) The waste organic mass flow entering the process (E_b) shall be determined in accordance with the requirements of paragraph (b)(5)(iv) of this section.

(iii) The fraction of organic biodegraded (F_{bio}) shall be determined using the procedure specified in 40 CFR part 63, appendix C of this chapter.

(iv) The MR_{bio} shall be calculated by using the mass flow rates and fraction of organic biodegraded determined in accordance with the requirements of paragraphs (b)(9)(ii) and (b)(9)(iii), respectively, of this section and the following equation:

$$MR_{bio} = E_b \times F_{bio}$$

Where:

MR_{bio} = Actual organic mass biodegradation rate, kg/hr.
E_b = Waste organic mass flow entering process as determined in accordance with the requirements of paragraph (b)(5)(iv) of this section, kg/hr.
F_{bio} = Fraction of organic biodegraded as determined in accordance with the requirements of paragraph (b)(9)(iii) of this section.

(c) Procedure to determine the maximum organic vapor pressure of a hazardous waste in a tank.

(1) An owner or operator shall determine the maximum organic vapor pressure for each hazardous waste placed in a tank using Tank Level 1 controls in accordance with the standards specified in Sec. 265.1085(c) of this subpart.

(2) An owner or operator shall use either direct measurement as specified in paragraph (c)(3) of this section or knowledge of the waste as specified by paragraph (c)(4) of this section to determine the maximum organic vapor pressure which is representative of the hazardous waste composition stored or treated in the tank.

(3) Direct measurement to determine the maximum organic vapor pressure of a hazardous waste.

(i) Sampling. A sufficient number of samples shall be collected to be representative of the waste contained in the tank. All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the hazardous waste are collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained on-site in the facility operating records. An example of an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846, (incorporated by reference--refer to Sec. 260.11(a) of this chapter), or in Method 25D in 40 CFR part 60, appendix A.

(ii) Analysis. Any appropriate one of the following methods may be used to analyze the samples and compute the maximum organic vapor pressure of the hazardous waste:

(A) Method 25E in 40 CFR part 60 appendix A;

(B) Methods described in American Petroleum Institute Publication 2517, Third Edition, February 1989, "Evaporative Loss from External Floating-Roof Tanks," (incorporated by reference--refer to Sec. 260.11 of this chapter);

(C) Methods obtained from standard reference texts;

(D) ASTM Method 2879-92 (incorporated by reference--refer to Sec. 260.11 of this chapter); and

(E) Any other method approved by the Regional Administrator.

(4) Use of knowledge to determine the maximum organic vapor pressure of the hazardous waste. Documentation shall be prepared and recorded that presents the information used as the basis for the owner's or operator's knowledge that the maximum organic vapor pressure of the hazardous waste is less than the maximum vapor pressure limit listed in Sec. 265.1085(b)(1)(i) of this subpart for the applicable tank design capacity category. An example of information that may be used is documentation that the hazardous waste is generated by a process for which at other locations it previously has been determined by direct measurement that the waste maximum organic vapor pressure is less than the maximum vapor pressure limit for the appropriate tank design capacity category.

(d) Procedure for determining no detectable organic emissions for the purpose of complying with this subpart:

(1) The test shall be conducted in accordance with the procedures specified in Method 21 of 40 CFR part 60, appendix A. Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the cover and associated closure devices shall be checked. Potential leak interfaces that are associated with covers and closure devices include, but are not limited to: The interface of the cover and its foundation

mounting; the periphery of any opening on the cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure relief valve.

(2) The test shall be performed when the unit contains a hazardous waste having an organic concentration representative of the range of concentrations for the hazardous waste expected to be managed in the unit. During the test, the cover and closure devices shall be secured in the closed position.

(3) The detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the organic constituents in the hazardous waste placed in the waste management unit, not for each individual organic constituent.

(4) The detection instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21 of 40 CFR part 60, appendix A.

(5) Calibration gases shall be as follows:
  (i) Zero air (less than 10 ppmv hydrocarbon in air), and
  (ii) A mixture of methane in air at a concentration of approximately, but less than 10,000 ppmv.

(6) The background level shall be determined according to the procedures in Method 21 of 40 CFR part 60, appendix A.

(7) Each potential leak interface shall be checked by traversing the instrument probe around the potential leak interface as close to the interface as possible, as described in Method 21 of 40 CFR part 60, appendix A. In the case when the configuration of the cover or closure device prevents a complete traverse of the interface, all accessible portions of the interface shall be sampled. In the case when the configuration of the closure device prevents any sampling at the interface and the device is equipped with an enclosed extension or horn (e.g., some pressure relief devices), the instrument probe inlet shall be placed at approximately the center of the exhaust area to the atmosphere.

(8) The arithmetic difference between the maximum organic concentration indicated by the instrument and the background level shall be compared with the value of 500 ppmv except when monitoring a seal around a rotating shaft that passes through a cover opening, in which case the comparison shall be as specified in paragraph (d)(9) of this section. If the difference is less than 500 ppmv, then the potential leak interface is determined to operate with no detectable organic emissions.

(9) For the seals around a rotating shaft that passes through a cover opening, the arithmetic difference between the maximum organic concentration indicated by the instrument and the background level shall be compared with the value of 10,000 ppmw. If the difference is less than 10,000 ppmw, then the potential leak interface is determined to operate with no detectable organic emissions.

265.1085 Standards: Tanks

(a) The provisions of this section apply to the control of air pollutant emissions from tanks for which Sec. 265.1083(b) of this subpart references the use of this section for such air emission control

(b) The owner or operator shall control air pollutant emissions from each tank subject to this section in accordance with the following requirements, as applicable:

(1) For a tank that manages hazardous waste that meets all of the conditions specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section, the owner or operator shall control air pollutant emissions from the tank in accordance with the Tank Level 1 controls specified in paragraph (c) of this section or the Tank Level 2 controls specified in paragraph (d) of this section.

  (i) The hazardous waste in the tank has a maximum organic vapor pressure which is less than the maximum organic vapor pressure limit for the tank's design capacity category as follows: (a) For a tank design capacity equal to or greater than 151 m^3, the maximum organic vapor pressure limit for the tank is 5.2 kPa.

    (A) For a tank design capacity equal to or greater than 151 m^3, the maximum organic vapor pressure limit for the tank is 5.2 kPa.

    (B) For a tank design capacity equal to or greater than 75 m^3 but less than 151 m^3, the maximum organic vapor pressure limit for the tank is 27.6 kPa.

    (C) For a tank design capacity less than 75 m^3, the maximum organic vapor pressure limit for the tank is 76.6 kPa.

  (ii) The hazardous waste in the tank is not heated by the owner or operator to a temperature that is greater than the temperature at which the maximum organic vapor pressure of the hazardous waste is determined for the purpose of complying with paragraph (b)(1)(i) of this section.

  (iii) The hazardous waste in the tank is not treated by the owner or operator using a waste stabilization process, as defined in Sec. 265.1081 of this subpart.

(2) For a tank that manages hazardous waste that does not meet all of the conditions specified in paragraphs (b)(1)(i) through (b)(1)(iii) of this section, the owner or operator shall control air pollutant emissions from

the tank by using Tank Level 2 controls in accordance with the requirements of paragraph (d) of this section. Examples of tanks required to use Tank Level 2 controls include: A tank used for a waste stabilization process; and a tank for which the hazardous waste in the tank has a maximum organic vapor pressure that is equal to or greater than the maximum organic vapor pressure limit for the tank's design capacity category as specified in paragraph (b)(1)(i) of this section.

(c) Owners and operators controlling air pollutant emissions from a tank using Tank Level 1 controls shall meet the requirements specified in paragraphs (c)(1) through (c)(4) of this section:

(1) The owner or operator shall determine the maximum organic vapor pressure for a hazardous waste to be managed in the tank using Tank Level 1 controls before the first time the hazardous waste is placed in the tank. The maximum organic vapor pressure shall be determined using the procedures specified in Sec. 265.1084(c) of this subpart. Thereafter, the owner or operator shall perform a new determination whenever changes to the hazardous waste managed in the tank could potentially cause the maximum organic vapor pressure to increase to a level that is equal to or greater than the maximum organic vapor pressure limit for the tank design capacity category specified in paragraph (b)(1)(i) of this section, as applicable to the tank.

(2) The tank shall be equipped with a fixed roof designed to meet the following specifications:

(i) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the hazardous waste in the tank. The fixed roof may be a separate cover installed on the tank (e.g., a removable cover mounted on an open-top tank) or may be an integral part of the tank structural design (e.g., a horizontal cylindrical tank equipped with a hatch).

(ii) The fixed roof shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.

(iii) Each opening in the fixed roof shall be either:

(A) Equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device; or

(B) Connected by a closed-vent system that is vented to a control device. The control device shall remove or destroy organics in the vent stream, and it shall be operating whenever hazardous waste is managed in the tank.

(iv) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: Organic vapor permeability, the effects of any contact with the hazardous waste or its vapors managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(3) Whenever a hazardous waste is in the tank, the fixed roof shall be installed with each closure device secured in the closed position except as follows:

(i) Opening of closure devices or removal of the fixed roof is allowed at the following times:

(A) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(B) To remove accumulated sludge or other residues from the bottom of tank.

(ii) Opening of a spring-loaded pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the tank internal pressure in accordance with the tank design specifications. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the tank internal pressure is within the internal pressure operating range determined by the owner or operator based on the tank manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the tank internal pressure exceeds the internal pressure operating range for the tank as a result of loading operations or diurnal ambient temperature fluctuations.

(iii) Opening of a safety device, as defined in Sec. 265.1081 of this subpart, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The owner or operator shall inspect the air emission control equipment in accordance with the following requirements.

(i) The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The owner or operator shall perform an initial inspection of the fixed roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except under the special conditions provided for in paragraph (l) of this section.

(iii) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (k) of this section.

(iv) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Sec. 265.1090(b) of this subpart.

(d) Owners and operators controlling air pollutant emissions from a tank using Tank Level 2 controls shall use one of the following tanks:

(1) A fixed-roof tank equipped with an internal floating roof in accordance with the requirements specified in paragraph (e) of this section;

(2) A tank equipped with an external floating roof in accordance with the requirements specified in paragraph (f) of this section;

(3) A tank vented through a closed-vent system to a control device in accordance with the requirements specified in paragraph (g) of this section;

(4) A pressure tank designed and operated in accordance with the requirements specified in paragraph (h) of this section; or

(5) A tank located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device in accordance with the requirements specified in paragraph (i) of this section.

(e) The owner or operator who controls air pollutant emissions from a tank using a fixed-roof with an internal floating roof shall meet the requirements specified in paragraphs (e)(1) through (e)(3) of this section.

(1) The tank shall be equipped with a fixed roof and an internal floating roof in accordance with the following requirements:

(i) The internal floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

(ii) The internal floating roof shall be equipped with a continuous seal between the wall of the tank and the floating roof edge that meets either of the following requirements:

(A) A single continuous seal that is either a liquid-mounted seal or a metallic shoe seal, as defined in Sec. 265.1081 of this subpart; or

(B) Two continuous seals mounted one above the other. The lower seal may be a vapor-mounted seal.

(iii) The internal floating roof shall meet the following specifications:

(A) Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(B) Each opening in the internal floating roof shall be equipped with a gasketed cover or a gasketed lid except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains.

(C) Each penetration of the internal floating roof for the purpose of sampling shall have a slit fabric cover that covers at least 90 percent of the opening.

(D) Each automatic bleeder vent and rim space vent shall be gasketed.

(E) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(F) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover.

(2) The owner or operator shall operate the tank in accordance with the following requirements:

(i) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be completed as soon as practical.

(ii) Automatic bleeder vents are to be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(iii) Prior to filling the tank, each cover, access hatch, gauge float well or lid on any opening in the internal floating roof shall be bolted or fastened closed (i.e., no visible gaps). Rim space vents are

to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim exceeds the manufacturer's recommended setting.

(3) The owner or operator shall inspect the internal floating roof in accordance with the procedures specified as follows:

(i) The floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: The internal floating roof is not floating on the surface of the liquid inside the tank; liquid has accumulated on top of the internal floating roof; any portion of the roof seals have detached from the roof rim; holes, tears, or other openings are visible in the seal fabric; the gaskets no longer close off the hazardous waste surface from the atmosphere; or the slotted membrane has more than 10 percent open area.

(ii) The owner or operator shall inspect the internal floating roof components as follows except as provided in paragraph (e)(3)(iii) of this section:

(A) Visually inspect the internal floating roof components through openings on the fixed-roof (e.g., manholes and roof hatches) at least once every 12 months after initial fill, and

(B) Visually inspect the internal floating roof, primary seal, secondary seal (if one is in service), gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every 10 years.

(iii) As an alternative to performing the inspections specified in paragraph (e)(3)(ii) of this section for an internal floating roof equipped with two continuous seals mounted one above the other, the owner or operator may visually inspect the internal floating roof, primary and secondary seals, gaskets, slotted membranes, and sleeve seals (if any) each time the tank is emptied and degassed and at least every 5 years.

(iv) Prior to each inspection required by paragraph (e)(3)(ii) or (e)(3)(iii) of this section, the owner or operator shall notify the Regional Administrator in advance of each inspection to provide the Regional Administrator with the opportunity to have an observer present during the inspection. The owner or operator shall notify the Regional Administrator of the date and location of the inspection as follows:

(A) Prior to each visual inspection of an internal floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the owner or operator so that it is received by the Regional Administrator at least 30 calendar days before refilling the tank except when an inspection is not planned as provided for in paragraph (e)(3)(iv)(B) of this section.

(B) When a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator shall notify the Regional Administrator as soon as possible, but no later than 7 calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the Regional Administrator at least 7 calendar days before refilling the tank.

(v) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (k) of this section.

(vi) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Sec. 265.1090(b) of this subpart.

(f) The owner or operator who controls air pollutant emissions from a tank using an external floating roof shall meet the requirements specified in paragraphs (f)(1) through (f)(3) of this section.

(1) The owner or operator shall design the external floating roof in accordance with the following requirements:

(i) The external floating roof shall be designed to float on the liquid surface except when the floating roof must be supported by the leg supports.

(ii) The floating roof shall be equipped with two continuous seals, one above the other, between the wall of the tank and the roof edge. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be a liquid-mounted seal or a metallic shoe seal, as defined in Sec. 265.1081 of this subpart. The total area of the gaps between the tank wall and the primary seal shall not exceed 212 square centimeters (cm^2) per meter of tank diameter, and the width of any portion of these gaps shall not exceed 3.8 centimeters (cm). If a metallic shoe seal is used for the primary seal, the metallic shoe seal shall be designed so that one end extends into the liquid in the tank and the other end extends a vertical distance of at least 61 centimeters above the liquid surface.

(B) The secondary seal shall be mounted above the primary seal and cover the annular space between the floating roof and the wall of the tank. The total area of the gaps between the tank wall and the secondary seal shall not exceed 21.2 square centimeters (cm^2) per meter of tank diameter, and the width of any portion of these gaps shall not exceed 1.3 centimeters (cm).

(iii) The external floating roof shall meet the following specifications:

(A) Except for automatic bleeder vents (vacuum breaker vents) and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface.

(B) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be equipped with a gasketed cover, seal, or lid.

(C) Each access hatch and each gauge float well shall be equipped with a cover designed to be bolted or fastened when the cover is secured in the closed position.

(D) Each automatic bleeder vent and each rim space vent shall be equipped with a gasket.

(E) Each roof drain that empties into the liquid managed in the tank shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(F) Each unslotted and slotted guide pole well shall be equipped with a gasketed sliding cover or a flexible fabric sleeve seal.

(G) Each unslotted guide pole shall be equipped with a gasketed cap on the end of the pole.

(H) Each slotted guide pole shall be equipped with a gasketed float or other device which closes off the liquid surface from the atmosphere.

(I) Each gauge hatch and each sample well shall be equipped with a gasketed cover.

(2) The owner or operator shall operate the tank in accordance with the following requirements:

(i) When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be completed as soon as practical.

(ii) Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof shall be secured and maintained in a closed position at all times except when the closure device must be open for access.

(iii) Covers on each access hatch and each gauge float well shall be bolted or fastened when secured in the closed position.

(iv) Automatic bleeder vents shall be set closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the leg supports.

(v) Rim space vents shall be set to open only at those times that the roof is being floated off the roof leg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.

(vi) The cap on the end of each unslotted guide pole shall be secured in the closed position at all times except when measuring the level or collecting samples of the liquid in the tank.

(vii) The cover on each gauge hatch or sample well shall be secured in the closed position at all times except when the hatch or well must be opened for access.

(viii) Both the primary seal and the secondary seal shall completely cover the annular space between the external floating roof and the wall of the tank in a continuous fashion except during inspections.

(3) The owner or operator shall inspect the external floating roof in accordance with the procedures specified as follows:

(i) The owner or operator shall measure the external floating roof seal gaps in accordance with the following requirements:

(A) The owner or operator shall perform measurements of gaps between the tank wall and the primary seal within 60 calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every 5 years.

(B) The owner or operator shall perform measurements of gaps between the tank wall and the secondary seal within 60 calendar days after initial operation of the tank following installation of the floating roof and, thereafter, at least once every year.

(C) If a tank ceases to hold hazardous waste for a period of 1 year or more, subsequent introduction of hazardous waste into the tank shall be considered an initial operation for the purposes of paragraphs (f)(3)(i)(A) and (f)(3)(i)(B) of this section.

(D) The owner or operator shall determine the total surface area of gaps in the primary seal and in the secondary seal individually using the following procedure:

(1) The seal gap measurements shall be performed at one or more floating roof levels when the roof is floating off the roof supports.

(2) Seal gaps, if any, shall be measured around the entire perimeter of the floating roof in each place where a 0.32-centimeter (cm) diameter uniform probe passes freely

(without forcing or binding against the seal) between the seal and the wall of the tank and measure the circumferential distance of each such location.

(3) For a seal gap measured under paragraph (f)(3) of this section, the gap surface area shall be determined by using probes of various widths to measure accurately the actual distance from the tank wall to the seal and multiplying each such width by its respective circumferential distance.

(4) The total gap area shall be calculated by adding the gap surface areas determined for each identified gap location for the primary seal and the secondary seal individually, and then dividing the sum for each seal type by the nominal perimeter of the tank. These total gap areas for the primary seal and secondary seal are then are compared to the respective standards for the seal type as specified in paragraph (f)(1)(ii) of this section.

(E) In the event that the seal gap measurements do not conform to the specifications in paragraph (f)(1)(ii) of this section, the owner or operator shall repair the defect in accordance with the requirements of paragraph (k) of this section.

(F) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Sec. 265.1090(b) of this subpart.

(ii) The owner or operator shall visually inspect the external floating roof in accordance with the following requirements:

(A) The floating roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to: Holes, tears, or other openings in the rim seal or seal fabric of the floating roof; a rim seal detached from the floating roof; all or a portion of the floating roof deck being submerged below the surface of the liquid in the tank; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(B) The owner or operator shall perform an initial inspection of the external floating roof and its closure devices on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in paragraph (l) of this section.

(C) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (k) of this section.

(D) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Sec. 265.1090(b) of this subpart.

(iii) Prior to each inspection required by paragraph (f)(3)(i) or (f)(3)(ii) of this section, the owner or operator shall notify the Regional Administrator in advance of each inspection to provide the Regional Administrator with the opportunity to have an observer present during the inspection. The owner or operator shall notify the Regional Administrator of the date and location of the inspection as follows:

(A) Prior to each inspection to measure external floating roof seal gaps as required under paragraph (f)(3)(i) of this section, written notification shall be prepared and sent by the owner or operator so that it is received by the Regional Administrator at least 30 calendar days before the date the measurements are scheduled to be performed.

(B) Prior to each visual inspection of an external floating roof in a tank that has been emptied and degassed, written notification shall be prepared and sent by the owner or operator so that it is received by the Regional Administrator at least 30 calendar days before refilling the tank except when an inspection is not planned as provided for in paragraph (f)(3)(iii)(C) of this section.

(C) When a visual inspection is not planned and the owner or operator could not have known about the inspection 30 calendar days before refilling the tank, the owner or operator shall notify the Regional Administrator as soon as possible, but no later than 7 calendar days before refilling of the tank. This notification may be made by telephone and immediately followed by a written explanation for why the inspection is unplanned. Alternatively, written notification, including the explanation for the unplanned inspection, may be sent so that it is received by the Regional Administrator at least 7 calendar days before refilling the tank.

(g) The owner or operator who controls air pollutant emissions from a tank by venting the tank to a control device shall meet the requirements specified in paragraphs (g)(1) through (g)(3) of this section.

(1) The tank shall be covered by a fixed roof and vented directly through a closed-vent system to a control device in accordance with the following requirements:

(i) The fixed roof and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the tank.

(ii) Each opening in the fixed roof not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the fixed roof is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the fixed roof is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions.

(iii) The fixed roof and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the fixed roof and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the fixed roof and closure devices shall include: Organic vapor permeability, the effects of any contact with the liquid and its vapor managed in the tank; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the tank on which the fixed roof is installed.

(iv) The closed-vent system and control device shall be designed and operated in accordance with the requirements of Sec. 265.1088 of this subpart.

(2) Whenever a hazardous waste is in the tank, the fixed roof shall be installed with each closure device secured in the closed position and the vapor headspace underneath the fixed roof vented to the control device except as follows:

(i) Venting to the control device is not required, and opening of closure devices or removal of the fixed roof is allowed at the following times:

(A) To provide access to the tank for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the tank, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the tank.

(B) To remove accumulated sludge or other residues from the bottom of a tank.

(ii) Opening of a safety device, as defined in Sec. 265.1081 of this subpart, is allowed at any time conditions require doing so to avoid an unsafe condition.

(3) The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:

(i) The fixed roof and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the tank wall; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in Sec. 265.1088 of this subpart.

(iii) The owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the tank becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in paragraph (l) of this section.

(iv) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (k) of this section.

(v) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Sec. 265.1090(b) of this subpart.

(h) The owner or operator who controls air pollutant emissions by using a pressure tank shall meet the following requirements.

(1) The tank shall be designed not to vent to the atmosphere as a result of compression of the vapor headspace in the tank during filling of the tank to its design capacity.

(2) All tank openings shall be equipped with closure devices designed to operate with no detectable organic emissions as determined using the procedure specified in Sec. 265.1084(d) of this subpart.

(3) Whenever a hazardous waste is in the tank, the tank shall be operated as a closed system that does not vent to the atmosphere except in the event that a safety device, as defined in Sec. 265.1081 of this subpart, is required to open to avoid an unsafe condition.

(i) The owner or operator who controls air pollutant emissions by using an enclosure vented through a closed-vent system to an enclosed combustion control device shall meet the requirements specified in paragraphs (i)(1) through (i)(4) of this section.

(1) The tank shall be located inside an enclosure. The enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Procedure T–Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, Appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of material into or out of the enclosure by conveyor, vehicles, or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T–Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

(2) The enclosure shall be vented through a closed-vent system to an enclosed combustion control device that is designed and operated in accordance with the standards for either a vapor incinerator, boiler, or process heater specified in Sec. 265.1088 of this subpart.

(3) Safety devices, as defined in Sec. 265.1081 of this subpart, may be installed and operated as necessary on any enclosure, closed-vent system, or control device used to comply with the requirements of paragraphs (i)(1) and (i)(2) of this section.

(4) The owner or operator shall inspect and monitor the closed-vent system and control device as specified in Sec. 265.1088 of this subpart.

(j) The owner or operator shall transfer hazardous waste to a tank subject to this section in accordance with the following requirements:

(1) Transfer of hazardous waste, except as provided in paragraph (j)(2) of this section, to the tank from another tank subject to this section or from a surface impoundment subject to Sec. 265.1086 of this subpart shall be conducted using continuous hard-piping or another closed system that does not allow exposure of the hazardous waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR part 63, subpart RR–National Emission Standards for Individual Drain Systems.

(2) The requirements of paragraph (j)(1) of this section do not apply when transferring a hazardous waste to the tank under any of the following conditions:

(i) The hazardous waste meets the average VO concentration conditions specified in Sec. 265.1083(c)(1) of this subpart at the point of waste origination.

(ii) The hazardous waste has been treated by an organic destruction or removal process to meet the requirements in Sec. 265.1083(c)(2) of this subpart.

(k) The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of paragraphs (c)(4), (e)(3), (f)(3), or (g)(3) of this section as follows:

(1) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection, and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in paragraph (k)(2) of this section.

(2) Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available at the site to accept the hazardous waste normally managed in the tank. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the tank stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(l) Following the initial inspection and monitoring of the cover as required by the applicable provisions of this subpart, subsequent inspection and monitoring may be performed at intervals longer than 1 year under the following special conditions:

(1) In the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions, then the owner or operator may designate a cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:

(i) Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.

(ii) Develop and implement a written plan and schedule to inspect and monitor the cover, using the procedures specified in the applicable section of this subpart, as frequently as practicable during those times when a worker can safely access the cover.

(2) In the case when a tank is buried partially or entirely underground, an owner or operator is required to inspect and monitor, as required by the applicable provisions of this section, only those portions of the tank cover and those connections to the tank (e.g., fill ports, access hatches, gauge wells, etc.) that are located on or above the ground surface.

265.1086 Standards: surface impoundments.

(a) The provisions of this section apply to the control of air pollutant emissions from surface impoundments for which Sec. 265.1083(b) of this subpart references the use of this section for such air emission control.

(b) The owner or operator shall control air pollutant emissions from the surface impoundment by installing and operating either of the following:
  (1) A floating membrane cover in accordance with the provisions specified in paragraph (c) of this section; or
  (2) A cover that is vented through a closed-vent system to a control device in accordance with the provisions specified in paragraph (d) of this sections.

(c) The owner or operator who controls air pollutant emissions from a surface impoundment using a floating membrane cover shall meet the requirements specified in paragraphs (c)(1) through (c)(3) of this section.
  (1) The surface impoundment shall be equipped with a floating membrane cover designed to meet the following specifications:
    (i) The floating membrane cover shall be designed to float on the liquid surface during normal operations and form a continuous barrier over the entire surface area of the liquid.
    (ii) The cover shall be fabricated from a synthetic membrane material that is either:
      (A) High density polyethylene (HDPE) with a thickness no less than 2.5 millimeters (mm); or
      (B) A material or a composite of different materials determined to have both organic permeability properties that are equivalent to those of the material listed in paragraph (c)(1)(ii)(A) of this section and chemical and physical properties that maintain the material integrity for the intended service life of the material.
    (iii) The cover shall be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between cover section seams or between the interface of the cover edge and its foundation mountings.
    (iv) Except as provided for in paragraph (c)(1)(v) of this section, each opening in the floating membrane cover shall be equipped with a closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device.
    (v) The floating membrane cover may be equipped with one or more emergency cover drains for removal of stormwater. Each emergency cover drain shall be equipped with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening or a flexible fabric sleeve seal.
    (vi) The closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the closure devices throughout their intended service life. Factors to be considered when selecting the materials of construction and designing the cover and closure devices shall include: Organic vapor permeability; the effects of any contact with the liquid and its vapor managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the floating membrane cover is installed.
  (2) Whenever a hazardous waste is in the surface impoundment, the floating membrane cover shall float on the liquid and each closure device shall be secured in the closed position except as follows:
    (i) Opening of closure devices or removal of the cover is allowed at the following times:
      (A) To provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample the liquid in the surface impoundment, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly replace the cover and secure the closure device in the closed position, as applicable.
      (B) To remove accumulated sludge or other residues from the bottom of surface impoundment.
    (ii) Opening of a safety device, as defined in Sec. 265.1081 of this subpart, is allowed at any time conditions require doing so to avoid an unsafe condition.
  (3) The owner or operator shall inspect the floating membrane cover in accordance with the following procedures:
    (i) The floating membrane cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The owner or operator shall perform an initial inspection of the floating membrane cover and its closure devices on or before the date that the surface impoundment becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in paragraph (g) of this section.

(iii) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (f) of this section.

(iv) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Sec. 265.1090(c) of this subpart.

(d) The owner or operator who controls air pollutant emissions from a surface impoundment using a cover vented to a control device shall meet the requirements specified in paragraphs (d)(1) through (d)(3) of this section.

(1) The surface impoundment shall be covered by a cover and vented directly through a closed-vent system to a control device in accordance with the following requirements:

(i) The cover and its closure devices shall be designed to form a continuous barrier over the entire surface area of the liquid in the surface impoundment.

(ii) Each opening in the cover not vented to the control device shall be equipped with a closure device. If the pressure in the vapor headspace underneath the cover is less than atmospheric pressure when the control device is operating, the closure devices shall be designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the cover opening and the closure device. If the pressure in the vapor headspace underneath the cover is equal to or greater than atmospheric pressure when the control device is operating, the closure device shall be designed to operate with no detectable organic emissions using the procedure specified in Sec. 265.1084(d) of this subpart.

(iii) The cover and its closure devices shall be made of suitable materials that will minimize exposure of the hazardous waste to the atmosphere, to the extent practical, and will maintain the integrity of the cover and closure devices throughout their intended service life. Factors to be considered when selecting the materials for and designing the cover and closure devices shall include: Organic vapor permeability; the effects of any contact with the liquid or its vapors managed in the surface impoundment; the effects of outdoor exposure to wind, moisture, and sunlight; and the operating practices used for the surface impoundment on which the cover is installed.

(iv) The closed-vent system and control device shall be designed and operated in accordance with the requirements of Sec. 265.1088 of this subpart.

(2) Whenever a hazardous waste is in the surface impoundment, the cover shall be installed with each closure device secured in the closed position and the vapor headspace underneath the cover vented to the control device except as follows:

(i) Venting to the control device is not required, and opening of closure devices or removal of the cover is allowed at the following times:

(A) To provide access to the surface impoundment for performing routine inspection, maintenance, or other activities needed for normal operations. Examples of such activities include those times when a worker needs to open a port to sample liquid in the surface impoundment, or when a worker needs to open a hatch to maintain or repair equipment. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable, to the surface impoundment.

(B) To remove accumulated sludge or other residues from the bottom of surface impoundment.

(ii) Opening of a safety device, as defined in Sec. 265.1081 of this subpart, is allowed at any time conditions require doing so to avoid an unsafe condition.

(3) The owner or operator shall inspect and monitor the air emission control equipment in accordance with the following procedures:

(i) The surface impoundment cover and its closure devices shall be visually inspected by the owner or operator to check for defects that could result in air pollutant emissions. Defects include, but are not limited to, visible cracks, holes, or gaps in the cover section seams or between the interface of the cover edge and its foundation mountings; broken, cracked, or otherwise damaged seals or gaskets on closure devices; and broken or missing hatches, access covers, caps, or other closure devices.

(ii) The closed-vent system and control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in Sec. 265.1088 of this subpart.

(iii) The owner or operator shall perform an initial inspection of the air emission control equipment on or before the date that the surface impoundment becomes subject to this section. Thereafter, the owner or operator shall perform the inspections at least once every year except for the special conditions provided for in paragraph (g) of this section.

(iv) In the event that a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (f) of this section.

(v) The owner or operator shall maintain a record of the inspection in accordance with the requirements specified in Sec. 265.1090(c) of this subpart.

(e) The owner or operator shall transfer hazardous waste to a surface impoundment subject to this section in accordance with the following requirements:

(1) Transfer of hazardous waste, except as provided in paragraph (e)(2) of this section, to the surface impoundment from another surface impoundment subject to this section or from a tank subject to Sec. 265.1085 of this subpart shall be conducted using continuous hard- piping or another closed system that does not allow exposure of the waste to the atmosphere. For the purpose of complying with this provision, an individual drain system is considered to be a closed system when it meets the requirements of 40 CFR part 63, subpart RR–National Emission Standards for Individual Drain Systems.

(2) The requirements of paragraph (e)(1) of this section do not apply when transferring a hazardous waste to the surface impoundment under either of the following conditions:

(i) The hazardous waste meets the average VO concentration conditions specified in Sec. 265.1083(c)(1) of this subpart at the point of waste origination.

(ii) The hazardous waste has been treated by an organic destruction or removal process to meet the requirements in Sec. 265.1083(c)(2) of this subpart.

(f) The owner or operator shall repair each defect detected during an inspection performed in accordance with the requirements of paragraph (c)(3) or (d)(3) of this section as follows:

(1) The owner or operator shall make first efforts at repair of the defect no later than 5 calendar days after detection, and repair shall be completed as soon as possible but no later than 45 calendar days after detection except as provided in paragraph (f)(2) of this section.

(2) Repair of a defect may be delayed beyond 45 calendar days if the owner or operator determines that repair of the defect requires emptying or temporary removal from service of the surface impoundment and no alternative capacity is available at the site to accept the hazardous waste normally managed in the surface impoundment. In this case, the owner or operator shall repair the defect the next time the process or unit that is generating the hazardous waste managed in the tank stops operation. Repair of the defect shall be completed before the process or unit resumes operation.

(g) Following the initial inspection and monitoring of the cover as required by the applicable provisions of this subpart, subsequent inspection and monitoring may be performed at intervals longer than 1 year in the case when inspecting or monitoring the cover would expose a worker to dangerous, hazardous, or other unsafe conditions. In this case, the owner or operator may designate the cover as an "unsafe to inspect and monitor cover" and comply with all of the following requirements:

(1) Prepare a written explanation for the cover stating the reasons why the cover is unsafe to visually inspect or to monitor, if required.

(2) Develop and implement a written plan and schedule to inspect and monitor the cover using the procedures specified in the applicable section of this subpart as frequently as practicable during those times when a worker can safely access the cover.

265.1087 Standards: Containers.

(a) The provisions of this section apply to the control of air pollutant emissions from containers for which Sec. 265.1083(b) of this subpart references the use of this section for such air emission control.

(b) General requirements.

(1) The owner or operator shall control air pollutant emissions from each container subject to this section in accordance with the following requirements, as applicable to the container, except when the special provisions for waste stabilization processes specified in paragraph (b)(2) of this section apply to the container.

(i) For a container having a design capacity greater than 0.1 m^3 and less than or equal to 0.46 m^3, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in paragraph (c) of this section.

(ii) For a container having a design capacity greater than 0.46 m^3 that is not in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 1 standards specified in paragraph (c) of this section.

(iii) For a container having a design capacity greater than 0.46 m^3 that is in light material service, the owner or operator shall control air pollutant emissions from the container in accordance with the Container Level 2 standards specified in paragraph (d) of this section.

(2) When a container having a design capacity greater than 0.1 m^3 is used for treatment of a hazardous waste by a waste stabilization process, the owner or operator shall control air pollutant emissions from the

container in accordance with the Container Level 3 standards specified in paragraph (e) of this section at those times during the waste stabilization process when the hazardous waste in the container is exposed to the atmosphere.

(c) Container Level 1 standards.

(1) A container using Container Level 1 controls is one of the following:

(i) A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as specified in paragraph (f) of this section.

(ii) A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container (e.g., a lid on a drum or a suitably secured tarp on a roll-off box) or may be an integral part of the container structural design (e.g., a "portable tank" or bulk cargo container equipped with a screw-type cap).

(iii) An open-top container in which an organic-vapor suppressing barrier is placed on or over the hazardous waste in the container such that no hazardous waste is exposed to the atmosphere. One example of such a barrier is application of a suitable organic-vapor suppressing foam.

(2) A container used to meet the requirements of paragraph (c)(1)(ii) or (c)(1)(iii) of this section shall be equipped with covers and closure devices, as applicable to the container, that are composed of suitable materials to minimize exposure of the hazardous waste to the atmosphere and to maintain the equipment integrity for as long as it is in service. Factors to be considered in selecting the materials of construction and designing the cover and closure devices shall include: Organic vapor permeability, the effects of contact with the hazardous waste or its vapor managed in the container; the effects of outdoor exposure of the closure device or cover material to wind, moisture, and sunlight; and the operating practices for which the container is intended to be used.

(3) Whenever a hazardous waste is in a container using Container Level 1 controls, the owner or operator shall install all covers and closure devices for the container, as applicable to the container, and secure and maintain each closure device in the closed position except as follows:

(i) Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container as follows:

(A) In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(B) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

(ii) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:

(A) For the purpose of meeting the requirements of this section, an empty container as defined in 40 CFR 261.7(b) may be open to the atmosphere at any time (i.e., covers and closure devices are not required to be secured in the closed position on an empty container).

(B) In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in 40 CFR 261.7(b), the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(iii) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(iv) Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the container internal pressure in accordance with the design specifications of the container. The device shall be designed to operate with no detectable organic emissions when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(v) Opening of a safety device, as defined in Sec. 265.1081 of this subpart, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The owner or operator of containers using Container Level 1 controls shall inspect the containers and their covers and closure devices as follows:

(i) In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied (i.e., does not meet the conditions for an empty container as specified in 40 CFR 261.7(b)) within 24 hours after the container is accepted at the facility, the owner or operator shall visually inspect the container and its cover and closure devices to check for visi' cracks, holes, gaps, or other open spaces into the interior of the container when the cover an closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (c)(4)(iii) of this section.

(ii) In the case when a container used for managing hazardous waste remains at the facility for a period of 1 year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (c)(4)(iii) of this section.

(iii) When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than 24 hours after detection, and repair shall be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

(5) The owner or operator shall maintain at the facility a copy of the procedure used to determine that containers with capacity of 0.46 m^3 or greater, which do not meet applicable DOT regulations as specified in paragraph (f) of this section, are not managing hazardous waste in light material service.

(d) Container Level 2 standards.

(1) A container using Container Level 2 controls is one of the following:

(i) A container that meets the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as specified in paragraph (f) of this section.

(ii) A container that operates with no detectable organic emissions as defined in Sec. 265.1081 of this subpart and determined in accordance with the procedure specified in paragraph (g) of this section.

(iii) A container that has been demonstrated within the preceding 12 months to be vapor-tight by using 40 CFR part 60, appendix A, Method 27 in accordance with the procedure specified in paragraph (h) of this section.

(2) Transfer of hazardous waste in or out of a container using Container Level 2 controls shall be conducted in such a manner as to minimize exposure of the hazardous waste to the atmosphere, to the extent practical, considering the physical properties of the hazardous waste and good engineering and safety practices for handling flammable, ignitable, explosive, reactive or other hazardous materials. Examples of container loading procedures that the EPA considers to meet the requirements of this paragraph include using any one of the following: A submerged-fill pipe or other submerged-fill method to load liquids into the container; a vapor-balancing system or a vapor-recovery system to collect and control the vapors displaced from the container during filling operations; or a fitted opening in the top of a container through which the hazardous waste is filled and subsequently purging the transfer line before removing it from the container opening.

(3) Whenever a hazardous waste is in a container using Container Level 2 controls, the owner or operator shall install all covers and closure devices for the container, and secure and maintain each closure device in the closed position except as follows:

(i) Opening of a closure device or cover is allowed for the purpose of adding hazardous waste or other material to the container as follows:

(A) In the case when the container is filled to the intended final level in one continuous operation, the owner or operator shall promptly secure the closure devices in the closed position and install the covers, as applicable to the container, upon conclusion of the filling operation.

(B) In the case when discrete quantities or batches of material intermittently are added to the container over a period of time, the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon either the container being filled to the intended final level; the completion of a batch loading after which no additional material will be added to the container within 15 minutes; the person performing the loading operation leaving the immediate vicinity of the container; or the shutdown of the process generating the material being added to the container, whichever condition occurs first.

(ii) Opening of a closure device or cover is allowed for the purpose of removing hazardous waste from the container as follows:

(A) For the purpose of meeting the requirements of this section, an empty container as defined in 40 CFR 261.7(b) may be open to the atmosphere at any time (i.e., covers and closure devices are not required to be secured in the closed position on an empty container).

(B) In the case when discrete quantities or batches of material are removed from the container but the container does not meet the conditions to be an empty container as defined in 40 CFR 261.7(b), the owner or operator shall promptly secure the closure devices in the closed position and install covers, as applicable to the container, upon the completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container, whichever condition occurs first.

(iii) Opening of a closure device or cover is allowed when access inside the container is needed to perform routine activities other than transfer of hazardous waste. Examples of such activities include those times when a worker needs to open a port to measure the depth of or sample the material in the container, or when a worker needs to open a manhole hatch to access equipment inside the container. Following completion of the activity, the owner or operator shall promptly secure the closure device in the closed position or reinstall the cover, as applicable to the container.

(iv) Opening of a spring-loaded, pressure-vacuum relief valve, conservation vent, or similar type of pressure relief device which vents to the atmosphere is allowed during normal operations for the purpose of maintaining the internal pressure of the container in accordance with the container design specifications. The device shall be designed to operate with no detectable organic emission when the device is secured in the closed position. The settings at which the device opens shall be established such that the device remains in the closed position whenever the internal pressure of the container is within the internal pressure operating range determined by the owner or operator based on container manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials. Examples of normal operating conditions that may require these devices to open are during those times when the internal pressure of the container exceeds the internal pressure operating range for the container as a result of loading operations or diurnal ambient temperature fluctuations.

(v) Opening of a safety device, as defined in Sec. 265.1081 of this subpart, is allowed at any time conditions require doing so to avoid an unsafe condition.

(4) The owner or operator of containers using Container Level 2 controls shall inspect the containers and their covers and closure devices as follows:

(i) In the case when a hazardous waste already is in the container at the time the owner or operator first accepts possession of the container at the facility and the container is not emptied (i.e., does not meet the conditions for an empty container as specified in 40 CFR 261.7(b)) within 24 hours after the container arrives at the facility, the owner or operator shall visually inspect the container and its cover and closure devices to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (d)(4)(iii) of this section.

(ii) In the case when a container used for managing hazardous waste remains at the facility for a period of 1 year or more, the owner or operator shall visually inspect the container and its cover and closure devices initially and thereafter, at least once every 12 months, to check for visible cracks, holes, gaps, or other open spaces into the interior of the container when the cover and closure devices are secured in the closed position. If a defect is detected, the owner or operator shall repair the defect in accordance with the requirements of paragraph (d)(4)(iii) of this section.

(iii) When a defect is detected for the container, cover, or closure devices, the owner or operator shall make first efforts at repair of the defect no later than 24 hours after detection, and repair shall be completed as soon as possible but no later than 5 calendar days after detection. If repair of a defect cannot be completed within 5 calendar days, then the hazardous waste shall be removed from the container and the container shall not be used to manage hazardous waste until the defect is repaired.

(e) Container Level 3 standards.

(1) A container using Container Level 3 controls is one of the following:

(i) A container that is vented directly through a closed-vent system to a control device in accordance with the requirements of paragraph (e)(2)(ii) of this section.

(ii) A container that is vented inside an enclosure which is exhausted through a closed-vent system to a control device in accordance with the requirements of paragraphs (e)(2)(i) and (e)(2)(ii) of this section.

(2) The owner or operator shall meet the following requirements, as applicable to the type of air emission control equipment selected by the owner or operator:

(i) The container enclosure shall be designed and operated in accordance with the criteria for a permanent total enclosure as specified in "Proc ure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 4 FR 52.741, appendix B. The enclosure may have permanent or temporary openings to allow worker access; passage of containers through the enclosure by conveyor or other mechanical means; entry of permanent mechanical or electrical equipment; or direct airflow into the enclosure. The owner or operator shall perform the verification procedure for the enclosure as specified in Section 5.0 to "Procedure T--Criteria for and Verification of a Permanent or Temporary Total Enclosure" initially when the enclosure is first installed and, thereafter, annually.

(ii) The closed-vent system and control device shall be designed and operated in accordance with the requirements of Sec. 265.1088 of this subpart.

(3) Safety devices, as defined in Sec. 265.1081 of this subpart, may be installed and operated as necessary on any container, enclosure, closed-vent system, or control device used to comply with the requirements of paragraph (e)(1) of this section.

(4) Owners and operators using Container Level 3 controls in accordance with the provisions of this subpart shall inspect and monitor the closed-vent systems and control devices as specified in Sec. 265.1088 of this subpart.

(5) Owners and operators that use Container Level 3 controls in accordance with the provisions of this subpart shall prepare and maintain the records specified in Sec. 265.1090(d) of this subpart.

(f) For the purpose of compliance with paragraph (c)(1)(i) or (d)(1)(i) of this section, containers shall be used that meet the applicable U.S. Department of Transportation (DOT) regulations on packaging hazardous materials for transportation as follows:

(1) The container meets the applicable requirements specified in 49 CFR part 178--Specifications for Packaging or 49 CFR part 179--Specifications for Tank Cars.

(2) Hazardous waste is managed in the container in accordance with the applicable requirements specified in 49 CFR part 107, subpart B--Exemptions; 49 CFR part 172--Hazardous Materials Table, Special Provisions, Hazardous Materials Communications, Emergency Response Information, and Training Requirements; 49 CFR part 173--Shippers--General Requirements for Shipments and Packages; and 49 CFR part 180--Continuing Qualification and Maintenance of Packagings.

(3) For the purpose of complying with this subpart, no exceptions to the 49 CFR part 178 or part 179 regulations are allowed except as provided for in paragraph (f)(4) of this section.

(4) For a lab pack that is managed in accordance with the requirements of 49 CFR part 178 for the purpose of complying with this subpart, an owner or operator may comply with the exceptions for combination packagings specified in 49 CFR 173.12(b).

(g) The owner or operator shall use the procedure specified in Sec. 265.1084(d) of this subpart for determining a container operates with no detectable organic emissions for the purpose of complying with paragraph (d)(1)(ii) of this section.

(1) Each potential leak interface (i.e., a location where organic vapor leakage could occur) on the container, its cover, and associated closure devices, as applicable to the container, shall be checked. Potential leak interfaces that are associated with containers include, but are not limited to: The interface of the cover rim

and the container wall; the periphery of any opening on the container or container cover and its associated closure device; and the sealing seat interface on a spring-loaded pressure-relief valve.

(2) The test shall be performed when the container is filled with a material having a volatile organic concentration representative of the range of volatile organic concentrations for the hazardous wastes expected to be managed in this type of container. During the test, the container cover and closure devices shall be secured in the closed position.

(h) Procedure for determining a container to be vapor-tight using Method 27 of 40 CFR part 60, appendix A for the purpose of complying with paragraph (d)(1)(iii) of this section.

(1) The test shall be performed in accordance with Method 27 of 40 CFR part 60, appendix A of this chapter.

(2) A pressure measurement device shall be used that has a precision of ±2.5 mm water and that is capable of measuring above the pressure at which the container is to be tested for vapor tightness.

(3) If the test results determined by Method 27 indicate that the container sustains a pressure change less than or equal to 750 Pascals within 5 minutes after it is pressurized to a minimum of 4,500 Pascals, then the container is determined to be vapor-tight.

265.1088 Standards: Closed-vent systems and control devices.

(a) This section applies to each closed-vent system and control device installed and operated by the owner or operator to control air emissions in accordance with standards of this subpart.

(b) The closed-vent system shall meet the following requirements:

(1) The closed-vent system shall route the gases, vapors, and fumes emitted from the hazardous waste in the waste management unit to a control device that meets the requirements specified in paragraph (c) of this section.

(2) The closed-vent system shall be designed and operated in accordance with the requirements specified in Section 265.1033(j) of this part.

(3) In the case when the closed-vent system includes bypass devices that could be used to divert the gas or vapor stream to the atmosphere before entering the control device, each bypass device shall be equipped with either a flow indicator as specified in paragraph (b)(3)(i) of this sectiln or a seal or locking device as specified in paragraph (b)(3)(ii) of this section. For the purpose of complying with this paragraph, low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, spring-loaded pressure relief valves, and other fittings used for safety purposes are not considered to be bypass devices.

(i) If a flow indicator is used to comply with paragraph (b)(3) of this section, the indicator shall be installed at the inlet to the bypass line used to divert gases and vapors from the closed-vent system to the atmosphere at a point upstream of the control device inlet. For this paragraph, a flow indicator means a device which indicates the presence of either gas or vapor flow in the bypass line.

(ii) If a seal or locking device is used to comply with paragraph (b)(3) of this section, the device shall be placed on the methanism by which the bypass device position is controlled (e.g., valve handle, damper lever) when the bypass device is in the closed position such that the bypass device cannot be opened without breaking the seal or removing the lock. Examples of such devices include, but are not limited to, a car-seal or a lock-and-key configurative valve. The owner or operator shall visually inspect the seal or closure mechanism at least once every month to verify that the by pass methanism is maintained in the closed position.

(4) The closed-vent system shall be inspected and monitored by the owner or operator in accordance with the procedure specified in 40 CFR 265.1033(k).

(c) The control device shall meet the following requirements:

(1) The control device shall be one of the following devices:

(i) A control device designed and operated to reduce the total organic content of the inlet vapor stream vented to the control device by at least 95 percent by weight;

(ii) An enclosed combustion device designed and operated in accordance with the requirements of Section 265.1033(c); or

(iii) A flare designed and operated in accordance with the requirements of Section 265.1033(d).

(2) The owner or operator who elects to use a closed-vent system and control device to comply with the requirements of this section shall comply with the requirements specified in paragraphs (c)(2)(i) through (c)(2)(vi) of this section.

(i) Periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of paragraphs (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this section, as applicable, shall not exceed 240 hours per year.

(ii) The specifications and requirements in paragraphs (c)(1)(i), (c)(1)(ii), and (c)(1)(iii) of this section for control devices do not apply during periods of planned routine maintenance.

(iii) The specifications and requirements in paragraphs (c)(1)(i), (c)(1)(ii), and (c)(1)(iii) of this section for control devices do not apply during a control device system malfunction.

(iv) The owner or operator shall demonstrate compliance with the requirements of paragraph (c)(2)(i) of this section (i.e., planned routine maintenance of a control device, during which the control device does not meet the specifications of paragraphs (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this section, as applicable, shall not exceed 240 hours per year) by recording the information specified in Sec. 265.1090(e)(1)(v) of this subpart.

(v) The owner or operator shall correct control device system malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of air pollutants.

(vi) The owner or operator shall operate the closed-vent system such that gases, vapors, and/or fumes are not actively vented to the control device during periods of planned maintenance or control device system malfunction (i.e., periods when the control device is not operating or not operating normally) except in cases when it is necessary to vent the gases, vapors, or fumes to avoid an unsafe condition or to implement malfunction corrective actions or planned maintenance actions.

(3) The owner or operator using a carbon adsorption system to comply with paragraph (c)(1) of this section shall operate and maintain the control device in accordance with the following requirements:

(i) Following the initial startup of the control device, all activated carbon in the control device shall be replaced with fresh carbon on a regular basis in accordance with the requirements of Section 265.1033(g) of Section 265.1033(h).

(ii) All carbon removed from the control device shall be managed in accordance with the requirements of 40 CFR 265.1033(m).

(4) An owner or 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 shall operate and maintain the control device in accordance with the requirements of Section 265.1033(i).

(5) The owner or operator shall demonstrate that a control device achieves the performance requirements of paragraph (c)(1) of this section as follows:

(i) An owner or operator shall demonstrate using either a performance test as specified in paragraph (c)(5)(iii) of this section or a design analysis as specified in paragraph (c)(5)(iv) of this section the performance of each control device except for the following:

(A) A flare;

(B) A boiler or process heater with a design heat input capacity of 44 megawatts or greater;

(C) A boiler or process heater into which the vent stream is introduced with the primary fuel;

(D) A boiler or inductrial furnace burning hazardous waste for which the owner or operator has been issued a final permit under 40 CFR part 270 and has designed and operates the unit in accordance with the requirements of 40 CFR part 266, subpart H; or

(E) A boiler or industrial furnace burning hazardous waste for which the owner or operator has designed and operates in accordance with the interim status requirements of 40 CFR part 266, subpart H.

(ii) An owner or operator shall demonstrate the performance of each flare in accordance with the requirements specified in Section 265.1033(e).

(iii) For a performance test conducted to meet the requirements of paragraph (c)(5)(i) of this section, the owner or operator shall use the test methods and procedures specified in Section 265.1034(c)(1) through (c)(4).

(iv) For a design analysis conducted to meet the requirements of paragraph (c)(5)(i) of this section, the design analysis shall meet the requirements specified in Section 265.1035(b)(4)(iii).

(v) The owner or operator shall demonstrate that a carbon adsorption system achieves the performance requirements of paragraph (c)(1) of this section based on the total quantity of organics vented to the atmosphere from all carbon adsorption system equipment that is used for organic adsorption, organic desorption or carbon regeneration, organic recovery, and carbon disposal.

(6) If the owner or operator and the Regional Administrator do not agree on a demonstration of control device performance using a design analysis then the disagreement shall be resolved using the results of a performance test performed by the owner or operator in accordance with the requirements of paragraph (c)(5)(iii) of this section. The Regional Administrator may choose to have an authorized representative observe the performance test.

(7) The control device shall be inspected and monitored by the owner or operator in accordance with the procedures specified in 40 CFR 265.1033(f)(2) and 40 CFR 265.1033(k). The readings from each monitoring device required by 40 CFR 265.1033(f)(2) shall be inspected at least once each operating day to check control device operation. Any necessary corrective measures shall be immediately implemented to ensure the control device is operated in compliance with the requirements of this section.

265.1089 Inspection and monitoring requirements.

(a) The owner or operator shall inspect and monitor air emission control equipment used to comply with this subpart in accordance with the applicable requirements specified in Section 265.1085 through Section 265.1088 of this subpart.

(b) The owner or operator shall develop and implement a written plan and schedule to perform the inspections and monitoring required by paragraph (a) of this section. The owner or operator shall incorporate this plan and schedule into the facility inspection plan required under 40 CFR 265.15.

265.1090 Recordkeeping requirements

(a) Each owner or operator of a facility subject to requirements in this subpart shall record and maintain the information specified in paragraphs (b) through (i) of this section, as applicable to the facility. Except for air emission control equipment design documentation and information required by paragraph (i) of this section, records required by this section shall be maintained in the operating record for a minimum of 3 years. Air emission control equipment design documentation shall be maintained in the operating record until the air emission control equipment is replaced or otherwise no longer in service. Information required by paragraph (i) of this section shall be maintained in the operating record for as long as the tank or container is not using air emission controls specified in Secs. 264.1084 through 264.1087 of this subpart in accordance with the conditions specified in Sec. 264.1084(d) of this subpart.

(b) The owner or operator of a tank using air emission controls in accordance with the requirements of Sec. 265.1085 of this subpart shall prepare and maintain records for the tank that include the following information:

(1) For each tank using air emission controls in accordance with the requirements of Sec. 265.1085 of this subpart, the owner or operator shall record:

(i) A tank identification number (or other unique identification description as selected by the owner or operator).

(ii) A record for each inspection required by Sec. 265.1085 of this subpart that includes the following information:

(A) Date inspection was conducted.

(B) For each defect detected during the inspection, the following information: the location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of Sec. 265.1085 of this subpart, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(2) In addition to the information required by paragraph (b)(1) of this section, the owner or operator shall record the following information, as applicable to the tank:

(i) The owner or operator using a fixed roof to comply with the Tank Level 1 control requirements specified in Sec. 265.1085(c) of this subpart shall prepare and maintain records for each determination for the maximum organic vapor pressure of the hazardous waste in the tank performed in accordance with the requirements of Sec. 265.1085(c) of this subpart. The records shall include the date and time the samples were collected, the analysis method used, and the analysis results.

(ii) The owner or operator using an internal floating roof to comply with the Tank Level 2 control requirements specified in Sec. 265.1085(e) of this subpart shall prepare and maintain documentation describing the floating roof design.

(iii) Owners and operators using an external floating roof to comply with the Tank Level 2 control requirements specified in Sec. 265.1085(f) of this subpart shall prepare and maintain the following records:

(A) Documentation describing the floating roof design and the dimensions of the tank.

(B) Records for each seal gap inspection required by Sec. 265.1085(f)(3) of this subpart describing the results of the seal gap measurements. The records shall include the date that the measurements were performed, the raw data obtained for the measurements, and the calculations of the total gap surface area. In the event that the seal gap measurements do not conform to the specifications in Sec. 265.1085(f)(1) of this subpart, the records shall include a description of the repairs that were made, the date the repairs were made, and the date the tank was emptied, if necessary.

(iv) Each owner or operator using an enclosure to comply with the Tank Level 2 control requirements specified in Sec. 265.1085(i) of this subpart shall prepare and maintain the following records:

(A) Records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T–Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

(B) Records required for the closed-vent system and control device in accordance with the requirements of paragraph (e) of this section.

(c) The owner or operator of a surface impoundment using air emission controls in accordance with the requirements of Sec. 265.1086 of this subpart shall prepare and maintain records for the surface impoundment that include the following information:

(1) A surface impoundment identification number (or other unique identification description as selected by the owner or operator).

(2) Documentation describing the floating membrane cover or cover design, as applicable to the surface impoundment, that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in Sec. 265.1086(c) of this subpart.

(3) A record for each inspection required by Sec. 265.1086 of this subpart that includes the following information:

(i) Date inspection was conducted.

(ii) For each defect detected during the inspection the following information: The location of the defect, a description of the defect, the date of detection, and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with the provisions of Sec. 265.1086(f) of this subpart, the owner or operator shall also record the reason for the delay and the date that completion of repair of the defect is expected.

(4) For a surface impoundment equipped with a cover and vented through a closed-vent system to a control device, the owner or operator shall prepare and maintain the records specified in paragraph (e) of this section.

(d) The owner or operator of containers using Container Level 3 air emission controls in accordance with the requirements of Sec. 265.1087 of this subpart shall prepare and maintain records that include the following information:

(1) Records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T–Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.

(2) Records required for the closed-vent system and control device in accordance with the requirements of paragraph (e) of this section.

(e) The owner or operator using a closed-vent system and control device in accordance with the requirements of Sec. 265.1088 of this subpart shall prepare and maintain records that include the following information:

(1) Documentation for the closed-vent system and control device that includes:

(i) Certification that is signed and dated by the owner or operator stating that the control device is designed to operate at the performance level documented by a design analysis as specified in paragraph (e)(1)(ii) of this section or by performance tests as specified in paragraph (e)(1)(iii) of this section when the tank, surface impoundment, or container is or would be operating at capacity or the highest level reasonably expected to occur.

(ii) If a design analysis is used, then design documentation as specified in 40 CFR 265.1035(b)(4). The documentation shall include information prepared by the owner or operator or provided by the control device manufacturer or vendor that describes the control device design in accordance with 40 CFR 265.1035(b)(4)(iii) and certification by the owner or operator that the control equipment meets the applicable specifications.

(iii) If performance tests are used, then a performance test plan as specified in 40 CFR 265.1035(b)(3) and all test results.

(iv) Information as required by 40 CFR 265.1035(c)(1) and 40 CFR 265.1035(c)(2), as applicable.

(v) An owner or operator shall record, on a semiannual basis, the information specified in paragraphs (e)(1)(v)(A) and (e)(1)(v)(B) of this section for those planned routine maintenance operations that would require the control device not to meet the requirements of Sec. 265.1088 (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this subpart, as applicable.

(A) A description of the planned routine maintenance that is anticipated to be performed for the control device during the next 6-month period. This description shall include the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods.

(B) A description of the planned routine maintenance that was performed for the control device during the previous 6-month period. This description shall include the type of maintenance

performed and the total number of hours during those 6 months that the control device did not meet the requirements of Sec. 265.1088 (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this subpart, as applicable, due to planned routine maintenance.

(vi) An owner or operator shall record the information specified in paragraphs (e)(1)(vi)(A) through (e)(1)(vi)(C) of this section for those unexpected control device system malfunctions that would require the control device not to meet the requirements of Sec. 265.1088 (c)(1)(i), (c)(1)(ii), or (c)(1)(iii) of this subpart, as applicable.

(A) The occurrence and duration of each malfunction of the control device system.

(B) The duration of each period during a malfunction when gases, vapors, or fumes are vented from the waste management unit through the closed-vent system to the control device while the control device is not properly functioning.

(C) Actions taken during periods of malfunction to restore a malfunctioning control device to its normal or usual manner of operation.

(vii) Records of the management of carbon removed from a carbon adsorption system conducted in accordance with Sec. 265.1088(c)(3)(ii) of this subpart.

(f) The owner or operator of a tank, surface impoundment, or container exempted from standards in accordance with the provisions of Sec. 265.1083(c) of this subpart shall prepare and maintain the following records, as applicable:

(1) For tanks, surface impoundments, or containers exempted under the hazardous waste organic concentration conditions specified in Sec. 265.1083 (c)(1) or (c)(2) of this subpart, the owner or operator shall record the information used for each waste determination (e.g., test results, measurements, calculations, and other documentation) in the facility operating log. If analysis results for waste samples are used for the waste determination, then the owner or operator shall record the date, time, and location that each waste sample is collected in accordance with applicable requirements of Sec. 265.1084 of this subpart.

(2) For tanks, surface impoundments, or containers exempted under the provisions of Sec. 265.1083(c)(2)(vii) or Sec. 265.1083(c)(2)(viii) of this subpart, the owner or operator shall record the identification number for the incinerator, boiler, or industrial furnace in which the hazardous waste is treated.

(g) An owner or operator designating a cover as "unsafe to inspect and monitor" pursuant to Sec. 265.1085(l) or Sec. 265.1086(g) of this subpart shall record in a log that is kept in the facility operating record the following information: The identification numbers for waste management units with covers that are designated as "unsafe to inspect and monitor," the explanation for each cover stating why the cover is unsafe to inspect and monitor, and the plan and schedule for inspecting and monitoring each cover.

(h) The owner or operator of a facility that is subject to this subpart and to the control device standards in 40 CFR part 60, subpart VV, or 40 CFR part 61, subpart V, may elect to demonstrate compliance with the applicable sections of this subpart by documentation either pursuant to this subpart, or pursuant to the provisions of 40 CFR part 60, subpart VV or 40 CFR part 61, subpart V, to the extent that the documentation required by 40 CFR parts 60 or 61 duplicates the documentation required by this section.

(i) For each tank or container not using air emission controls specified in Secs. 265.1085 through 265.1088 of this subpart in accordance with the conditions specified in Sec. 265.1080(d) of this subpart, the owner or operator shall record and maintain the following information:

(1) A list of the individual organic peroxide compounds manufactured at the facility that meet the conditions specified in Sec. 265.1080(d)(1).

(2) A description of how the hazardous waste containing the organic peroxide compounds identified in paragraph (i)(1) of this section are managed at the facility in tanks and containers. This description shall include the following information:

(i) For the tanks used at the facility to manage this hazardous waste, sufficient information shall be provided to describe for each tank: A facility identification number for the tank; the purpose and placement of this tank in the management train of this hazardous waste; and the procedures used to ultimately dispose of the hazardous waste managed in the tanks.

(ii) For containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to describe: A facility identification number for the container or group of containers; the purpose and placement of this container, or group of containers, in the management train of this hazardous waste; and the procedures used to ultimately dispose of the hazardous waste handled in the containers.

(3) An explanation of why managing the hazardous waste containing the organic peroxide compounds identified in paragraph (i)(1) of this section in the tanks and containers as described in paragraph (i)(2) of this section would create an undue safety hazard if the air emission controls, as required under Secs. 265.1085 through 265.1088 of this subpart, are installed and operated on these waste management units. This explanation shall include the following information:

(i) For tanks used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain: How use of the required air emission controls on the tanks would affect the tank design features and facility operating procedures currently used to prevent an undue safety

hazard during the management of this hazardous waste in the tanks; and why installation of safety devices on the required air emission controls, as allowed under this subpart, will not address those situations in which evacuation of tanks equipped with these air emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides.

(ii) For containers used at the facility to manage these hazardous wastes, sufficient information shall be provided to explain: How use of the required air emission controls on the containers would affect the container design features and handling procedures currently used to prevent an undue safety hazard during the management of this hazardous waste in the containers; and why installation of safety devices on the required air emission controls, as allowed under this subpart, will not address those situations in which evacuation of containers equipped with these air emission controls is necessary and consistent with good engineering and safety practices for handling organic peroxides.

§265.1091 Reserved:

(v) 40 CFR 265.1100 through 265.1102 (Subpart DD), "Containment Buildings", are incorporated by reference including subsequent amendments and editions.

SUBPART DD - CONTAINMENT BUILDINGS

265.1100 Applicability

The requirements of this subpart apply to owners or operators who store or treat hazardous waste in units designed and operated under Section 265.1101 of this subpart. These provisions will become effective on February 18, 1993, although owner or operator may notify the Regional Administrator of his intent to be bound by this subpart at an earlier time. The owner or operator is not subject to the definition of land disposal in RCRA section 3004(K) proviced that the unit:

(a) Is a completely enclosed, self-supporting structure that is designed and constructed of man-made materials of sufficient strength and thickness to support themselves, the waste contents, and any personal and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls;

(b) Has a primary barrier that is designed to be sufficiently durable to withstand the movement of personnel and handling equipment within the unit;

(c) If the unit is used to manage liquids, has:

(1) A primary barrier designed and constructed of materials to prevent migration of hazardous constituents into the barrier;

(2) A liquid collection system designed and constructed of materials to minimize the accumulation of liquid on the primary barrier; and

(3) A secondary containment system designed and constructed of materials to prevent migration of hazardous constituents into the barrier, with a leak detection and liquid collection system capable of detecting, collecting, and removing leaks of hazardous constituents at the earliest possible time, unless the unit has been granted a variance from the secondary containment system requirements under Section 265.1101(b)(4);

(d) Has controls as needed to permit fugitive dust emissions; and

(e) Is designed and operated to ensure containment and prevent the tracking of materials from the unit by personnel or equipment.

265.1101 Design and Operating Standards

(a) All containment buildings must comply with the following design standards:

(1) The containment building must be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, run-on), and to assure containment of managed wastes.

(2) The floor and containment walls of the unit, including the secondary containment system if required under paragraph (b) of this section, must be designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls. The unit must be designed so that it has sufficient structural strength to prevent collapse or other failure. All surfaces to be in contact with hazardous wastes must be chemically compatible with those wastes. EPA will consider standards established by professional organizations generally recognized by the industry such as the American Concrete Institute (ACI) and the American Society of Testing Materials (ASTM) in judging the structural integrity requirements of this paragraph. If appropriate to the nature of the waste management operation to take
place in the unit, an exception to the structural strength requirement may be made for light-weight doors and windows that meet these criteria;

(i) They provide an effective barrier against fugitive dust emissions under paragraph (c)(1)(iv); and

(ii) The unit is designed and operated in a fashion that assures that wastes will not actually come in contact with these openings.

(3) Incompatible hazardous wastes or treatment reagents must not be placed in the unit or its secondary containment system if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail.

(4) A containment building must have a primary barrier designed to withstand the movement of personnel, waste, and handling equipment in the unit during the operating life of the unit and appropriate for the physical and chemical characteristics of the waste to be managed.

(b) For a containment building used to manage hazardous wastes containing free liquids or treated with free liquids (the presence of which is determined by the paint filter test, a visual examination, or other appropriate means), the owner or operator must include:

(1) A primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (e.g., a geomembrane covered by a concrete wear surface).

(2) A liquid collection and removal system to prevent the accumulation of liquid on the primary barrier of the containment building:

(i) The primary barrier must be sloped to drain liquids to the associated collection system; and

(ii) Liquids and waste must be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time that protects human health and the environment.

(3) A secondary containment system including a secondary barrier designed and constructed to prevent migration of hazardous constituents into the barrier, and a leak detection system that is capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practicable time.

(i) The requirements of the leak detection component of the secondary containment system are satisfied by installation of a system that is, at a minimum:

(A) Constructed with a bottom slope of 1 percent or more; and

(B) Constructed of a granular drainage material with a hydraulic conductivity of 1×10^{2} cm/sec or more and a thickness of 12 inches (30.5 cm) or more, or constructed of synthetic or geonet drainage materials with a transmissivity of 3×10^{-5} m^2/sec or more.

(ii) If treatment is to be conducted in the building, an area in which such treatment will be conducted must be designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building.

(iii) The secondary containment system must be constructed of materials that are chemically resistant to the waste and liquids managed in the containment building and of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building. (Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions. A containment building can serve as an external liner system for a tank, provided it meets the requirements of Section 265.193(d)(1). In addition, the containment building must meet the requirements of Section 265.193(b) and (c) to be considered an acceptable secondary containment system for a tank.)

(4) For existing units other than 90-day generator units, the Regional Administrator may delay the secondary containment requirement for up to two years, based on a demonstration by the owner or operator that the unit substantially meets the standards of this Subpart. In making this demonstration, the owner or operator must:

(i) Provide written notice to the Regional Administrator of their request request by February 18, 1993. This notification must describe the unit and its operating practices with specific reference to the performance of existing containment systems, and specific plans for retrofitting the unit with secondary containment;

(ii) Respond to any comments from the Regional Administrator on these plans within 30 days; and

(iii) Fulfill the terms of the revised plans, if such plans are approved by the Regional Administrator.

(c) Owners or operators of all containment buildings must:

(1) Use controls and practices to ensure containment of the hazardous waste within the unit; and, at a minimum:

(i) Maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier;

(ii) Maintain the level of the stored/treated hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded;

(iii) Take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste. An area must be designated to decontaminate equipment and any rinsate must be collected and properly managed; and

(iv) Take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions. In addition, all associated particulate collection devices (e.g., fabric filter, electrostatic precipitator) must be operated and maintained with sound air pollution control

practices. This state of no visible emissions must be maintained effectively at all times during normal operating conditions, including when vehicles and personnel are entering and exiting the unit.

(2) Obtain certification by a qualified registered professional engineer that the containment building design meets the requirements of paragraphs (a) through (c) of this section. For units placed into operation prior to February 18, 1993, this certification must be placed in the facility's operating record (on-site files for generators who are not formally required to have operating records) no later than 60 days after the date of initial operation of the unit. After February 18, 1993, PE certification will be required prior to operation of the unit.

(3) Throughout the active life of the containment building, if the owner or operator detects a condition that could lead to or has caused a release of hazardous waste, must repair the condition promptly, in accordance with the following procedures.

(i) Upon detection of a condition that has led to a release of hazardous waste (e.g., upon detection of leakage from the primary barrier) the owner or operator must:

(A) Enter a record of the discovery in the facility operating record;

(B) Immediately remove the portion of the containment building affected by the condition from service;

(C) Determine what steps must be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs; and

(D) Within 7 days after the discovery of the condition, notify the Regional Administrator of the condition, and within 14 working days, provide a written notice to the Regional Administrator with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work.

(ii) The Regional Administrator will review the information submitted, make a determination regarding whether the containment building must be removed from service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing.

(iii) Upon completing all repairs and cleanup the owner or operator must notify the Regional Administrator in writing and provide a verification, signed by a qualified, registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with paragraph (c)(3)(i)(D) of this section.

(4) Inspect and record in the facility's operating record, at least once every seven days, data gathered from monitoring equipment and leak detection equipment as well as the containment building and the area immediately surrounding the containment building to detect signs of releases of hazardous waste.

(d) For containment buildings that contains both areas with and without secondary containment, the owner or operator must:

(1) Design and operate each area in accordance with the requirements enumerated in paragraphs (a) through (c) of this section;

(2) Take measures to prevent the release of liquids or wet materials into areas without secondary containment; and

(3) Maintain in the facility's operating log a written description of the operating procedures used to maintain the integrity of areas without secondary containment.

(e) Notwithstanding any other provision of this subpart the Regional Administrator may waive requirements for secondary containment for a permitted containment building where the owner operator demonstrates that the only free liquids in the unit are limited amounts of dust suppression liquids required to meet occupational health and safety requirements, and where containment of managed wastes and liquids can be assured without a secondary containment system.

265.1102 Closure and Post-closure Care

(a) At closure of a containment building, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.,) contaminated subsoils, and structures and equipment contaminated with waste and leachate, and manage them as hazardous waste unless Section 261.3(d) of this chapter applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for containment buildings must meet all of the requirements specified in subparts G and H of this part.

(b) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contaminated components, subsoils, structures, and equipment as required in paragraph (a) of this section, the owner or operator finds that not all contaminated subsoils 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 (Section 265.310). In addition, for the purposes of closure, post-

closure, and financial responsibility, such a containment building is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in subparts G and H of this part.

(w) Appendices to 40 CFR Part 265 are incorporated by reference including subsequent amendments and editions.

APPENDICES TO PART 265

APPENDIX I TO PART 265 - RECORDKEEPING INSTRUCTIONS

The recordkeeping provisions of Section 265.73 specify that an owner or operator must keep a written operating record at his facility. This appendix provides additional instructions for keeping portions of the operating record. See Section 265.73(b) for additional recordkeeping requirements.

The following information must be recorded as it becomes available, and maintained in the operating record until closure of the facility in the following manner:

Records of each hazardous waste received, treated, stored, or disposed of at the facility which include the following:

(1) A description by its common name and the EPA Hazardous Waste Number(s) from Part 261 of this chapter which apply to the waste. The waste description also must include the waste's physical form, i.e., liquid, sludge, solid, or contained gas. If the waste is not listed in Part 261, Subpart D of this chapter, the description also must include the process that produced it(for example, solid filter cake from production of _____, EPA Hazardous Waste Number WO51). Each hazardous waste listed in Part 261, Subpart D of this chapter and each hazardous waste characteristic defined in Part 261, Subpart C of this chapter has a four-digit EPA Hazardous Waste Number assigned to it. This number must be used for recordkeeping and reporting purposes. Where a hazardous waste contains more than one listed hazardous waste, or where more than one hazardous waste characteristic applies to the waste, the waste description must include all applicable EPA Hazardous Waste Numbers.

(2) The estimated or manifest-reported weight, or volume and density, where applicable, in one of the units of measure specified in Table 1; and

TABLE 1

Unit of measure	Code [1]
Gallons	G
Gallons per Hour	E
Gallons per Day	U
Liters	L
Liters per Hour	H
Liters per Day	V
Short Tons per Hour	D
Metric Tons per Hour	W
Short Tons per Day	N
Metric Tons per Day	S
Pounds per Hour	J
Kilograms per Hour	R
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
Btu's per Hour	I

[1]Single digit symbols are used here for data processing purposes.

(3) The method(s) [by handling code(s) as specified in Table 2] and date(s) of treatment, storage, or disposal.

TABLE 2 - HANDLING CODES FOR TREATMENT, STORAGE, AND DISPOSAL METHODS

Enter the handling code(s) listed below that most closely represents the technique(s) used at the facility to treat, store or dispose of each quantity of hazardous waste received:

1. Storage

S01 Container (barrel, drum, etc.)
S02 Tank
S03 Waste pile
S04 Surface impoundment
S05 Drip Pad
S06 Containment Building (Storage)
S99 Other Storage (specify)

2. Treatment

(a) Thermal Treatment

T06 Liqui ajection incinerator
T07 Rotar, kiln incinerator
T08 Fluidized bed incinerator
T09 Multiple hearth incinerator
T10 Infrared furnace incinerator
T11 Molten salt destructor
T12 Pyrolysis
T13 Wet Air oxidation
T14 Calcination
T15 Microwave discharge
T18 Other (specify)

(b) Chemical Treatment

T19 Absorption mound
T20 Absorption field
T21 Chemical fixation
T22 Chemical oxidation
T23 Chemical precipitation
T24 Chemical reduction
T25 Chlorination
T26 Chlorinolysis
T27 Cyanide destruction
T28 Degradation
T29 Detoxification
T30 Ion exchange
T31 Neutralization
T32 Ozonation
T33 Photolysis
T34 Other (specify)

(c) Physical Treatment

(1) Separation of components:

T35 Centrifugation
T36 Clarification
T37 Coagulation
T38 Decanting
T39 Encapsulation

T40 Filtration
T41 Flocculation
T42 Flotation
T43 Foaming
T44 Sedimentation
T45 Thickening
T46 Ultrafiltration
T47 Other (specify)

(2) Removal of Specific Components:

T48 Absorption-molecular sieve
T49 Activated carbon
T50 Blending
T51 Catalysis
T52 Crystallization
T53 Dialysis
T54 Distillation
T55 Electrodialysis
T56 Electrolysis
T57 Evaporation
T58 High gradient magnetic separation
T59 Leaching
T60 Liquid ion exchange
T61 Liquid-liquid extraction
T62 Reverse osmosis
T63 Solvent recovery
T64 Stripping
T65 Sand filter
T66 Other (specify)

(d) Biological Treatment

T67 Activated sludge
T68 Aerobic lagoon
T69 Aerobic tank
T70 Anserobic tank
T71 Composting
T72 Septic tank
T73 Spray irrigation
T74 Thickening filter
T75 Tricking filter
T76 Waste stabilization pond
T77 Other (specify)
T78 [Reserved]
T79 [Reserved]

(e) Boilers and Industrial Furnaces

T80 Boiler
T81 Cement Kiln
T82 Lime Kiln
T83 Aggregate Kiln
T84 Phosphate Kiln
T85 Coke Oven
T86 Blast Furnace
T87 Smelting, Melting, or Refining Furnace
T88 Titanium Dioxide Chloride Process Oxidation Reactor
T89 Methane Reforming Furnace
T90 Pulping Liquor Recovery Furnace
T91 Combustion Device Used in the Recovery of Sulfur Values from Spent Sulfuric Acid

T92 Halogen Acid Furnaces
T93 Other Industrial Furnaces Listed in 40 CFR 260.10 (specify)

(f) Other Treatment

T94 Containment Building (Treatment)

3. Disposal

D79 Underground Injection
D80 Landfill
D81 Land treatment
D82 Ocean disposal
D83 Surface Impoundment (to be closed as a landfill)
D99 Other Disposal (specify)

4. Miscellaneous (Subpart X)

X01 Open Burning/Open Detonation
X02 Mechanical Processing
X03 Thermal Unit
X0 Geologic Repository
X9 Other Subpart X (specify)

APPENDIX II to PART 265 -- [Reserved]

APPENDIX III TO PART 265 -- EPA INTERIM PRIMARY DRINKING WATER STANDARDS

Parameter	Maximum level (mg/l
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium	0.05
Fluoride	1.4 - 2.4
Lead	0.05
Mercury	0.002
Nitrate (as N)	10
Selenium	0.01
Silver	0.05
Endrin	0.0002
Lindane	0.004
Methoxychlor	0.1
Toxaphene	0.005
2,4-D	0.1
2,4,5-TP Silver	0.01
Radium	5pCi/l
Gross Alpha	15 pCi/l
Gross Beta	4 millirem/yr.
Turbidity	1/TU
Coliform Bacteria	1/100 ml

[Comment: Turbidity is applicable only to surface water supplies.]

APPENDIX IV TO PART 265 -- TESTS FOR SIGNIFICANCE

As required in Section 265.93(b), the owner or operator must use the Student's t-test to determine statistically significant changes in the concentration or value of an indicator parameter in periodic groundwater samples when compared to the initial background concentration or value of that indicator parameter. The comparison must consider individually each of the wells in the monitoring system. For three of the indicator parameters (specific conductance, total organic carbon, and total organic halogen), a single-tailed Student's t-test must be used to test at the 0.01 level of significance for significant increases over background. The difference test for pH must be a two-tailed Student's t-test at the overall 0.01 level of significance.

The Student's t-test involves calculation of the value of a t-statistic for each comparison of the mean (average) concentration or value (based on a minimum of four replicate measurements) of an indicator parameter with its initial background concentration or value. The calculated value of the t-statistic must then be compared to the value of the t-statistic found in a table for t-test of significance at the specified level of significance. A calculated value of which exceeds the value of t found in the table indicates a statistically significant change in the concentration or value of the indicator parameter.

Formulae for calculation of the t-statistic and tables for t-test of significance can be found in most introductory statistics texts.

APPENDIX V TO PART 265 -- EXAMPLES OF POTENTIALLY INCOMPATIBLE WASTE

Many hazardous wastes, when mixed with other waste or materials at a hazardous waste facility, can produce effects which are harmful to human health and the environment, such as: (1) heat or pressure; (2) fire or explosion; (3) violent reaction; (4) toxic dusts, mists, fumes, or gases; or (5) flammable fumes or gases.

Below are examples of potentially incompatible wastes, waste components, and materials, along with the harmful consequences which result from mixing materials in one group with materials in another group. The list is intended as a guide to owners or operators of treatment, storage, and disposal facilities, and to enforcement and permit granting officials, to indicate the need for special precautions when managing these potentially incompatible waste materials or components.

This list is not intended to be exhaustive. An owner or operator must, as the regulations require, adequately analyze his wastes so that he can avoid creating uncontrolled substances or reactions of the type listed below, whether they are listed below or not.

It is possible for potentially incompatible wastes to be mixed in a way that precludes a reaction (e.g., adding acid to water rather than water to acid) or that neutralizes them by generating flammable gases in a closed tank equipped so that ignition cannot occur, and burning the gases in an incinerator).

In the lists below, the mixing of a Group A material with a Group B material may have the potential consequence as noted.

GROUP 1-A	GROUP 1-B
Acetylene sludge	Acid sludge
Alkaline caustic liquids	Acid and water
Alkaline cleaner	Battery acid
Alkaline corrosive liquids	Chemical cleaners
Alkaline corrosive battery fluid	Electrolyte, acid
Caustic wastewater	Etching acid liquid or solvent
Lime sludge and other corrosive alkalines	
Lime wastewater	Pickling liquor and other corrosive acids
	Spent acid
Lime and water	Spent mixed acid
Spent caustic	Spent sulfuric acid

Potential consequences: Heat generation; violent reaction.

Group 2-A	Group 2-B
Aluminum Beryllium Calcium Lithium Magnesium Potassium Sodium Zinc Powder Other reactive metals and metal hydrides	Any waste in Group 1-A or 1-B

Potential consequences: Fire or explosion; generation of flammable hydrogen gas.

Group 3-A	Group 3-B
Alcohols Water	Any concentrated waste in Groups 1-A or 1-B Calcium Lithium Metal hydrides Potassium SO_2Cl_2, $SOCL_2$, PCl3 CH_3SiCl_3 Other water reactive waste

Potential consequences: Fire, explosion, or heat generation; generation of flammable or toxic gases.

Group 4-A	Group 4-B
Alcohols Aldehydes Halogenated hydrocarbons Nitrated hydrocarbons Unsaturated hydrocarbons Other reactive organic compounds and solvents	Concentrated Group 1-A or 1-B wastes Group 2-A wastes

Potential consequences: Fire, explosion, or violent reaction.

Group 5-A	Group 5-B
Spent cyanide and sulfide solutions	Group 1-B wastes

Potential consequences: Generation of toxic hydrogen cyanide or hydrogen sulfide gas.

Group 6-A	Group 6-B
Chlorates	Acetic acid and other organic acids
Chlorine	Concentrated mineral acids
Chlorites	Group 2-A wastes
Chromic acid	Group 4-A wastes
Hyphochlorites	Other flammable and combustible wastes
Nitrates	
Nitric acid, fuming	
Perchlorates	
Permanganates	
Peroxides	
Other strong oxidizers	

Potential consequences: Fire, explosion, or violent reaction.

Source: "Law, Regulations, and Guidelines for Handling of Hazardous Waste." California Department of Health, February, 1975.

Appendix VI to Part 265.--Compounds With Henry's Law Constant Less Than 0.1 Y/X
[At 25 degrees Celsius]

Compound name	CAS No.
TRICHLORO(1,1,2)TRIFLUORO	.....
FORMALDEHYDE	50-00-0
HYDROCYANIC ACID	74-90-8
FORMAMIDE	.....
QUINONE	.....
DIMETHYL HYDRAZINE(1,1)	57-14-7
METHYL ACRYLATE	96-33-3
ACETAMIDE	60-35-5
METHYL HYDRAZINE	60-34-4
DIETHYLHYDRAZINE N,N	.....
FORMIC ACID	64-18-6
DIMETHYL DISULFIDE	624-92-0
PHORATE	298-02-2
HYDRAZINE	302-01-2
LEAD SUBACETATE	1335-32-
LEAD ACETATE	301-04-2
NAPHTHOL,beta-	135-19-3
DIETHYLENE GLYCOL MONOMETHYL ETHER	.....
NITROSODIMETHYLAMINE N	62-75-9
DIETHYLENE GLYCOL MONOBUTYL ETHER	.....
ACETYL-2-THIOUREA, 1-	591-08-2
ACRYLIC ACID	79-10-7
ETHYLENE GLYCOL MONOPHENYL ETHER	.....
ETHYLENE GLYCOL MONOMETHYL ETHER	.....
DIMETHYL FORMAMIDE	68-12-2
DIETHYLENE GLYCOL DIMETHYL ETHER	.....
PROPIOLACTONE b	57-57-8
ETHYLENE GLYCOL MONOPROPYL ETHER	.....
METHYL SULFURIC ACID	.....
METHYL THIOPHENOL 4	106-45-6
ETHYLENE GLYCOL MONOETHYL ETHER Cellosol	.....
DIMETHYL CARBAMOYL CHLORIDE	.....
ETHYLENE GLYCOL MONOETHYL ETHER ACETATE	.....
BUTYL CELLOSOLVE	111-76-2
TOLUENE DIAMINE(2,4)	95-80-7
DIMETHYLSULFOXIDE	.....
ANILINE	62-53-3
DIETHYLENE GLYCOL	111-46-6
ETHYLPHENOL, 3-	620-17-7
GYLCIDOL	556-52-5
BUTYRIC ACID	107-92-6
NITROSO-N-METHYLUREA N	684-93-5
MONOMETHYL FORMANIDE	.....
ETHYL CARBAMATE	.....
ETHYL MORPHOLINE, ethyl diethylene oxime	.....
ETHANOLAMINE(mono-)	141-43-5
ETHYLENE THIOUREA	.....
PHENOL	108-95-2
ETHYLENE GLYCOL MONOBUTYL ETHER	.....
CRESOL	1319-77-
PROPYLENE GLYCOL	57-55-6
TRIETHYLENE GLYCOL DIMETHYL ETHER	.....
CRESOL(-o)	95-48-7

Appendix VI to Part 265.--Compounds With Henry's Law Constant Less Than 0.1 Y/X
[At 25 degrees Celsius]

Compound name	CAS No.
TOLUIDINE (m)	.....
CHLOROPHENOL-4	106-48-9
BENZYL ALCOHOL	100-51-6
ACETALDOL	.....
CHLOROACETIC ACID	79-11-8
GLYPHOSATE	.....
ETHYLENE GLYCOL	107-21-1
ADENINE	73-24-5
HEXAMETHYLPHOSPHORAMIDE	.....
DIETHYLENE GLYCOL MONOETHYL ETHER ACETAT	.....
DICHLOROPHENOL 2,5	.....
CRESOL(-p)	106-44-5
NITROSOMORPHOLINE	.....
QUINOLINE	91-22-5
DIMETHYLSULFONE	.....
CRESOL(-m)	108-39-4
TOLUENE DIISOCYANATE(2,4)	584-84-9
HYDROXY-(2)-PROPIONITRILE	109-78-4
HEXANOIC ACID	142-62-1
FUMARIC ACID	110-17-8
METHANE SULFONIC ACID	75-75-2
MESITYL OXIDE	141-79-7
CHLORO-2,5-DIKETOPYRROLIDINE 3	.....
PYRIDINIUM BROMIDE	.....
METHYLIMINOACETIC ACID	.....
DIMETHOATE	60-51-5
GUANIDINE, NITROSO	674-81-7
PHENYLACETIC ACID	103-82-2
BENZENE SULFONIC ACID	.....
ACETYL-5-HYDROXYPIPERIDINE 3	.....
LEUCINE	61-90-5
alpha-PICOLINE	1333-41-
METHYL-2-METHOXYAZIRIDINE 1	.....
BROMOCHLOROMETHYL ACETATE	.....
DICHLOROTETRAHYDROFURAN 3,4	3511-19-
ACETYLPIPERIDINE 3	618-42-8
CHLORO-1,2-ETHANE DIOL	.....
CYANIDE	57-12-5
NIACINAMIDE	98-92-0
METHOXYPHENOL P	150-76-5
METHYLFURFURAL 5	620-02-0
GLYCINAMIDE	598-41-4
SUCCINIMIDE	123-56-8
SULFANILIC ACID	121-47-1
MALEIC ACID	110-16-7
AMETRYN	.....
DIMETHYLPHENOL(3,4)	.....
ANISIDINE,o-	90-04-0
TETRAETHYLENE PENTAMINE	.....
DIETHYLENE GLYCOL MONOETHYL ETHER	.....
CHLORACETOPHENONE,2-	93-76-5
DIPROPYLENE GLYCOL	.....

Appendix VI to Part 265.--Compounds With Henry's Law Constant Less Than 0.1 Y/X
[At 25 degrees Celsius]

Compound name	CAS No.
HEXAMETHYLENE 1,6 DIISOCYANATE	.....
NEOPENTYL GLYCOL	126-30-7
BHC,gamma-	58-89-9
PHENYLENE DIAMINE(-m)	108-45-2
CHLOROHYDRIN, a 3 CHLORO 1,2 PROPANEDIOL	.....
XYLENOL(3,4)	95-65-8
DINITRO-o-CRESOL(4,6)	534-52-1
PROPORUR (Baygon)	.....
DIBROMO-4-HYDROXYBENZONITRILE (3,5)	.....
CATECHOL	120-80-9
CHLOROANILINE,p-	106-47-8
DICHLORVOS	.....
ACRYLAMIDE	79-06-1
THIOSEMICARBAZIDE	79-19-6
TRIETHANOLAMINE	102-71-6
PENTAERYTHRITOL	115-77-5
PHENYLENE DIAMINE(-o)	95-54-5
CAPROLACTAM	.....
BENZOIC ACID	65-85-0
TOLUENEDIAMINE(3,4)	496-72-0
TRIPROPYLENE GLYCOL	.....
PHENYLENE DIAMINE(-p)	106-50-3
TEREPHTHALIC ACID	.....
NITROGLYCERIN	55-63-0
CHLORO(-p)CRESOL(-m)	59-50-7
DICHLOROANILINE 2,3-	.....
NITROANILINE(-o)	88-74-4
DIETHYL (N,N) ANILINE	91-66-7
NAPHTHOL,alpha-	90-15-3
AMINOPYRIDINE,4-	504-24-5
ADIPONITRILE	.....
BROMOXYNIL	.....
PHTHALIC ANHYDRIDE	85-44-9
MALEIC ANHYDRIDE	108-31-6
NITROPHENOL,2-	88-75-5
ACETYLAMINOFLUORENE,2	53-96-3
PROPANE SULTONE,1,3-	1120-71-
CITRIC ACID	77-92-9
EPINEPHRINE	51-43-4
CHLOROPHENOL POLYMERS	.....
CREOSOTE	8001-58-
FLUOROACETIC ACID, SODIUM SALT	62-74-8
SODIUM ACETATE	.....
SUCCINIC ACID	110-15-6
SODIUM FORMATE	141-53-7
PHENACETIN	62-44-2
HYDROQUINONE	123-31-9
DIMETHYLAMINOAZOBENZENE,4-	60-11-7
METHYLENE DIPHENYL DIISOCYANATE	.....
OXALIC ACID	144-62-7
BENZO(A)PYRENE	50-32-8
DICHLOROBENZONITRILE,2,6-	1194-65-6

Appendix VI to Part 265.--Compounds With Henry's Law Constant Less Than 0.1 Y/X
[At 25 degrees Celsius]

Compound name	CAS No.
AMINOBIPHENYL,4-	92-67-1
NAPHTHYLAMINE,alpha-	134-32-7
DIETHANOLAMINE	.....
METHYLENEDIANILINE 4,4	.....
NAPHTHYLAMINE,beta-	91-59-8
METHYLENE DIPHENYLAMINE (MDA)	.....
GLUTARIC ACID	110-94-1
RESORCINOL	108-46-3
TOLUIC ACID (para-)	99-94-5
GUTHION	.....
DIMETHYL PHTHALATE	131-11-3
GLYCERIN (GLYCEROL)	56-81-5
THIOFANOX	39196-18
DIBUTYLPHTHALATE	84-74-2
ALDICARB	116-06-3
NITROPHENOL,4-	100-02-7
METHYLENE-BIS (2-CHLOROANILINE),4,4'-	101-14-4
DIPHENYLHYDRAZINE(1,2)	122-66-7
METHOMYL	16752-77
MALATHION	121-75-5
PARATHION	56-38-2
ADIPIC ACID	124-04-9
ALACHLOR	15972-60
STRYCHNIDIN-10-ONE,2,3-DIMETHOXY-	357-57-3
TOLUENEDIAMINE(2,6)	823-40-5
CUMYLPHENOL-4	27576-86
DIAZINON	.....
BENZENE ARSONIC ACID	98-05-5
WARFARIN	81-81-2
METHYL PARATHION	298-00-0
DIETHYLTHIOPHOSPHATEBENZO M ETHYL PETHER	.....
PHENYL MERCURIC ACETATE	62-38-4
DIETHYL PROPIONAMIDE,2aN	15299-99
CHLOROBENZOPHENONE (PARA)	134-85-0
THIOUREA,1-(o-CHLOROPHENYL)-	5344-82-
DIMETHYLBENZIDINE 3,3	.....
DICHLORO-(2,6)-NITROANILINE(4)	99-30-9
CELLULOSE	9000-11-
CELL WALL	.....
BENZIDINE	92-87-5
TETRAETHYLDITHIOPYROPHOSPHATE	3689-24-
NABAM	.....
ATRAZINE	1912-24-
ENDRIN	72-20-8
BIS(2-ETHYLHEXYL) PHTHALATE	117-81-7
BENZO(A)ANTHRACENE	56-55-3
CYANOMETHYL BENZOATE 4	.....
ANTHRAQUINONE	84-65-1
STRYCHNINE	57-24-9
SIMAZINE	122-34-9
PYRENE	129-00-0
CHLOROBENZYLATE	510-15-6

Appendix VI to Part 265.–Compounds With Henry's Law Constant Less Than 0.1 Y/X
[At 25 degrees Celsius]

Compound name	CAS No.
DIMETHYLBENZ(A) ANTHRACENE(7,12)	57-97-6
INDENO(1,2,3-cd)-PYRENE	193-39-5
CHRYSENE	218-01-9
BENZO(ghi)PERYLENE	191-24-2
BENZO(k) FLUORANTHENE	207-08-9
DIBENZO(a,h)ANTHRACENE	53-70-3
DIETHYL PHOSPHOROTHIOATE	126-75-0

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. November 19, 1980;
Amended Eff. June 1, 1989; December 1, 1988; June 1, 1988;
February 1, 1988; December 1, 1987; August 1, 1987;
February 1, 1987; October 1, 1986; July 1, 1986; May 1, 1986; January 1, 1986; October 1, 1985;
July 1, 1985; April 1, 1985; April 1, 1984; October 1, 1983;
October 1, 1982; September 15, 1981.
Transferred and Recodified from 10 NCAC 10F .0033 Eff. April 4, 1990;
Amended Eff. July 1, 1995; April 1, 1993; October 1, 1992; February 2, 1992;
May 1, 1991; February 1, 1991; October 1, 1990; August 30, 1990.

.0111 STANDARDS FOR THE MANAGEMENT OF SPECIFIC HAZARDOUS WASTE AND SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES - PART 266

(a) 40 CFR 266.20 through 266.23 (Subpart C), "Recyclable Materials Used in a Manner Constituting Disposal", are incorporated by reference including subsequent amendments and editions.

SUBPART C -- RECYCLABLE MATERIALS USED IN A MANNER CONSTITUTING DISPOSAL

266.20 Applicability.

(a) The regulations of this subpart apply to recyclable materials that are applied to or placed on the land:
  (1) Without mixing with any other substance(s); or
  (2) After mixing or combination with any other substance(s). These materials will be referred to throughout this subpart as "materials used in a manner that constitutes disposal."

(b) Products produced for the general public's use that are used in a manner that constitutes disposal and that contain recyclable materials are not presently subject to regulation if the recyclable materials have undergone a chemical reaction in the course of producing the products so as to become inseparable by physical means and if such products meet the applicable treatment standards in Subpart D of Part 268 (or applicable prohibition levels in Section 268.32 or RCRA section 3004(d), where no treatment standards have been established) for each recyclable material (i.e., hazardous waste) that they contain. Commercial fertilizers that are produced for the general public's use that contain recyclable materials also are not presently subject to regulation provided they meet these same treatment standards or prohibition levels for each recyclable material that they contain. However, zinc-containing fertilizers using hazardous waste K061 that are produced for the general public's use are not presently subject to regulation.

(c) Anti-skid/deicing uses of slags, which are generated from high temperature metals recovery (HTMR) processing of hazardous waste K061, K062, and F006, in a manner constituting disposal are not covered by the exemption in paragraph (b) of this section and remain subject to regulation.

266.21 Standards applicable to generators and transporters of materials used in a manner that constitutes disposal.

Generators and transporters of materials that are used in a manner that constitutes disposal are subject to the applicable requirements of Parts 262 and 263 of this chapter, and the notification requirement under Section 3010 of RCRA.

266.22 Standards applicable to storers of materials that are to be used in a manner that constitutes disposal who are not the ultimate users.

Owners or operators of facilities that store recyclable materials that are to be used in a manner that constitutes disposal, but who are not the ultimate users of the materials, are regulated under all applicable provisions of Subparts A through L of Parts 264 and 265 and Parts 270 and 124 of this chapter and the notification requirement under Section 3010 of RCRA.

266.23 Standards applicable to users of materials that are used in a manner that constitutes disposal.

(a) Owners or operators of facilities that use recyclable materials in a manner that constitutes disposal are regulated under all applicable provisions of Subparts A through N of parts 124, 264, 265, 268, and 270 of this chapter and the notification requirement under section 3010 of RCRA. (These requirements do not apply to products which contain these recyclable materials under the provisions of section 266.20(b) of this chapter.)

(b) The use of waste or used oil or other material, which is contaminated with dioxin or any other hazardous waste (other than a waste identified solely on the basis of ignitability), for dust suppression or road treatment is prohibited.

{Note: 40 CFR 266.30 through 266.35 was deleted and text moved to 266.100 through 266.112, Subpart H.) The following Paragraph (b) is being removed from Rule .0111.}

(b) 40 CFR 266.30 through 266.35 (Subpart D), "Hazardous Waste Burned for Energy Recovery", are incorporated by reference including subsequent amendments and editions.

(c) 40 CFR 266.70 (Subpart F), "Recyclable Materials Utilized for Precious Metal Recovery", is incorporated by reference including subsequent amendments and editions.

SUBPART F - RECYCLABLE MATERIALS UTILIZED FOR PRECIOUS METAL RECOVERY

266.70 Applicability and requirements.

(a) The regulations of this subpart apply to recyclable materials that are reclaimed to recover economically significant amounts of gold, silver, platinum, paladium, irridium, osmium, rhodium, ruthenium, or any combination of these.

(b) Persons who generate, transport, or store recyclable materials that are regulated under this subpart are subject to the following requirements:
   (1) Notification requirements under Section 3010 of RCRA;
   (2) Subpart B of Part 262 (for generators), Sections 263.20 and 263.21 (for transporters), and Sections 265.71 and 265.72 (for persons who store) of this chapter, and.
   (3) For precious metals exported to or imported from designated OECD member countries for recovery, subpart H of part 262 and Section 265.12(a)(2) of this chapter. For precious metals exported to or imported from non-OECD countries for recovery, subparts E and F of 40 CFR part 262.

(c) Persons who store recycled materials that are regulated under this subpart must keep the following records to document that they are not accumulating these materials speculatively (as defined in Section 261.1(c) of this chapter):
   (1) Records showing the volume of these materials stored at the beginning of the calendar year;
   (2) The amount of these materials generated or received during the calendar year; and
   (3) The amount of materials remaining at the end of the calendar year.

(d) Recyclable materials that are regulated under this subpart that are accumulated speculatively (as defined in Section 261(c) of this chapter) are subject to all applicable provisions of Parts 262 through 265, 270, and 124 of this chapter.

(d) 40 CFR 266.80 (Subpart G), "Spent Lead-Acid Batteries Being Reclaimed", is incorporated by reference including subsequent amendments and editions.

SUBPART G – SPENT LEAD-ACID BATTERIES BEING RECLAIMED

266.80 Applicability and requirements.

(a) The regulations of this subpart apply to persons who reclaim (including regeneration) spent lead-acid batteries that are recyclable materials ("spent batteries"). Persons who generate, transport, or collect spent batteries, who regenerate spent batteries, or who store spent batteries but do not reclaim them (other than spent batteries that are to be regenerated) are not subject to regulation under Parts 262 through 266 or Parts 270 or 124 of this chapter, and also are not subject to the requirements of Section 3010 of RCRA.

(b) Owners or operators of facilities that store spent acid batteries before reclaiming (other than spent batteries that are to be regenerated) them are subject to the following requirements:
   (1) Notification requirements under Section 3010 of RCRA;
   (2) All applicable provisions in Subparts A, B. (but not Section 264.13 (waste analysis)), C, D, E (but not Section 264.71 or Section 264.72 (dealing with the use of the manifest and manifest discrepancies)), and F through L of Part 264 of this chapter.

(e) 40 CFR 266.100 through 266.112 (Subpart H), "Hazardous Waste Burned in Boilers and Industrial Furnaces", are incorporated by reference including subsequent amendments and editions.

SUBPART H -- HAZARDOUS WASTE BURNED IN BOILERS AND INDUSTRIAL FURNACES

266.100 Applicability.

(a) The regulations of this subpart apply to hazardous waste burned or processed in a boiler or industrial furnace (as defined in Section 260.10 of this chapter) irrespective of the purpose of burning or processing, except as provided by paragraphs (b), (c), (d), and (f) of this section. In this subpart, the term "burn" means burning for energy recovery or destruction, or processing for materials recovery or as an ingredient. The emissions standards of Sections 266.104, 266.105, 266.106, and 266.107 apply to facilities operating under interim status or under a RCRA operating permit as specified in Sections 266.102 and 266.103.

(b) The following hazardous wastes and facilities are not subject to regulation under this subpart:
  (1) Used oil burned for energy recovery that is also a hazardous waste solely because it exhibits a characteristic of hazardous waste identified in Subpart C of Part 261 of this chapter. Such used oil is subject to regulation under part 279 of this chapter;
  (2) Gas recovered from hazardous or solid waste landfills when such gas is burned for energy recovery;
  (3) Hazardous wastes that are exempt from regulation under Sections 261.4 and 261.6(a)(3) (iv through vi) of this chapter, and hazardous wastes that are subject to the special requirements for conditionally exempt small quantity generators under Section 261.5 of this chapter; and
  (4) Coke ovens, if the only hazardous waste burned is EPA Hazardous Waste No. K087, decanter tank tar sludge from coking operations.

(c) Owners and operators of smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces, but not including cement kilns, aggregate kilns, or halogen acid furnaces burning hazardous waste) that process hazardous waste solely for metal recovery are conditionally exempt from regulation under this subpart, except for Sections 266.101 and 266.112.
  (1) To be exempt from Sections 266.102 through 266.111, an owner or operator of a metal recovery furnace or mercury recovery furnace, must comply with the following requirements, except that an owner or operator of a lead or a nickel-chromium recovery furnace, or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, must comply with the requirements of paragraph (c)(3) of this section:
    (i) Provide a one-time written notice to the Director indicating the following:
      (A) The owner or operator claims exemption under this paragraph:
      (B) The hazardous waste is burned solely for metal recovery consistent with the provisions of paragraph (c)(2) of this section;
      (C) The hazardous waste contains recoverable levels of metals; and
      (D) The owner or operator will comply with the sampling and analysis and recordkeeping requirements of this paragraph;
    (ii) Sample and analyze the hazardous waste and other feedstocks as necessary to comply with the requirements of this paragraph under procedures specified by Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-848, incorporated by reference in Section 260.11 of this chapter or alternative methods that meet or exceed the SW-846 method performance capabilities. If SW-846 does not prescribe a method for a particular determination, the owner or operator shall use the best available method; and
    (iii) Maintain at the facility for at least three years records to document compliance with the provisions of this paragraph including limits on levels of toxic organic constituents and Btu value of the waste, and levels of recoverable metals in the hazardous waste compared to normal nonhazardous waste feedstocks.
  (2) A hazardous waste meeting 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 so is considered to be burned for destruction. The concentration of organic compounds in a waste as generated may be reduced to the 500 ppm limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the 500 ppm limit is prohibited and documentation that the waste has not been

impermissibly diluted must be retained in the records required by paragraph (c)(1)(iii) of this section; or

(ii) The hazardous waste has a heating value of 5,000 Btu/lb or more, as fired, and so is considered to be burned as fuel. The heating value of a waste as generated may be reduced to below the 5,000 BTu/lb limit by bona fide treatment that removes or destroys organic consitutents. Blending for dilution to meet the 5,000 Btu/lb limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the records required by paragraph (c)(1)(iii) of this section.

(3) To be exempt from Sections 266.102 through 266.111, an owner or operator of a lead or nickel-chromium or mercury recovery furnace, or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, must provide a one-time written notice to the Director identifying each hazardous waste burned and specifying whether the owner or operator claims an exemption for each waste under this paragraph or paragraph (c)(1) of this section. The owner or operator must comply with the requirements of paragraph (c)(1) of this section for those wastes claimed to be exempt under that paragraph and must comply with the requirements below for those wastes claimed to be exempt under this paragraph (c)(3).

(i) The hazardous wastes listed in appendices XI and XII, and XIII, part 266, and baghouse bags used to capture metallic dusts emitted by steel manufacturing are exempt from the requirements of paragraph (c)(1) of this section, provided that:

(A) A waste listed in appendix IX of this part must contain recoverable levels of lead, a waste listed in appendix XII of this part must contain recoverable levels of nickel or chromium, a waste listed in appendix XIII of this part must contain recoverable levels of mercury and contain less than 500 ppm of 40 CFR part 261, appendix VIII organic constituents, and baghouse bags used to capture metallic dusts emitted by steel manufacturing must contain recoverable levels of metal; and

(B) The waste does not exhibit the Toxicity Characteristic of Section 261.24 of this chapter for an organic constituent; and

(C) The waste is not a hazardous waste listed in subpart D of part 261 of this chapter because it is listed for an organic constituent as identified in appendix VII of part 261 of this chapter; and

(D) The owner or operator certifies in the one-time notice that hazardous waste is burned under the provisions of paragraph (c)(3) of this section and that sampling and analysis will be conducted or other information will be obtained as necessary to ensure continued compliance with these requirements. Sampling and analysis shall be conducted according to paragraph (c)(1)(ii) of this section and records to document compliance with paragraph (c)(3) of this section shall be kept for at least three years.

(ii) The Director may decide on a case-by-case basis that the toxic organic constituents in a material listed in appendix XI, XII, or XIII of this part that contains a total concentration of more than 500 ppm toxic organic compounds listed in appendix VIII, part 261 of this chapter, may pose a hazard to human health and the environment when burned in a metal recovery furnace exempt from the requirements of this subpart. In that situation, after adequate notice and opportunity for comment, the metal recovery furnace will become subject to the requirements of this subpart when burning that material. In making the hazard determination, the Director will consider the following factors:

(A) The concentration and toxicity of organic constituents in the material; and

(B) The level of destruction of toxic organic constituents provided by the furnace; and

(C) Whether the acceptable ambient levels established in appendices IV or V of this part may be exceeded for any toxic organic compound that may be emitted based on dispersion modeling to predict the maximum annual average off-site ground level concentration.

(d) The standards for direct transfer operations under Section 266.111 apply only to facilities subject to the permit standards of Section 266.102 or the interim status standards of Section 266.103.

(e) The management standards for residues under Section 266.112 apply to any boiler or industrial furnace burning hazardous waste.

(f) Owners and operators of smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces) that process hazardous waste for recovery of economically significant amounts of the precious metals gold, silver, platinum, paladium, irridium, osmium, rhodium, or ruthenium, or any combination of these are conditionally exempt from regulation under this subpart, except for Section 266.112. To be exempt from Sections 266.101 through 266.111, an owner or operator must:

(1) Provide a one time written notice to the Director indicating the following:
  (i) The owner or operator claims exemption under this paragraph;
  (ii) The hazardous waste is burned for legitimate recovery of precious metal; and
  (iii) The owner or operator will comply with the sampling and analysis and recordkeeping requirements of this paragraph; and
(2) Sample and analyze the hazardous waste as necessary to document that the waste is burned for recovery of economically significant amounts of precious metal using procedures specified by Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, incorporated by reference in Section 260.11 of this chapter or alternative methods that meet or exceed the SW-846 method performance capabilities. If SW-846 does not prescribe a method for a particular determination, the owner or operator shall use the best available method; and
(3) Maintain at the facility for at least three years records to document that all hazardous wastes burned are burned for recovery of economically significant amounts of precious metal.

266.101 Management prior to burning.

(a) "Generators." Generators of hazardous waste that is burned in a boiler or industrial furnace are subject to part 262 of this chapter.
(b) "Transporters." Transporters of hazardous waste that is burned in a boiler or industrial furnace are subject to part 263 of this chapter.
(c) "Storage facilities."
  (1) Owners and operators of facilities that store hazardous waste that is burned in a boiler or industrial furnace are subject to the applicable provisions of parts 264, 265, and 270 of this chapter, except as provided by paragraph (c)(2) of this section. These standards apply to storage by the burner as well as to storage facilities operated by intermediaries (processors, blenders, distributors, etc.) between the generator and the burner.
  (2) Owners and operators of facilities that burn, in an onsite boiler or industrial furnace exempt from regulation under the small quantity burner provisions of Section 266.108, hazardous waste that they generate are exempt from the regulations of parts 264, 265, and 270 of this chapter applicable to storage units for those storage units that store mixtures of hazardous waste and the primary fuel to the boiler or industrial furnace in tanks that feed the fuel mixture directly to the burner. Storage of hazardous waste prior to mixing with the primary fuel is subject to regulation as prescribed in paragraph (c)(1) of this section.

266.102 Permit standards for burners.

(a) "Applicability--"
  (1) "General." Owners and operators of boilers and industrial furnaces burning hazardous waste and not operating under interim status must comply with the requirements of this section and Sections 270.22 and 270.66 of this chapter, unless exempt under the small quantity burner exemption of Section 266.108.
  (2) "Applicability of part 264 standards." Owners and operators of boilers and industrial furnaces that burn hazardous waste are subject to the following provisions of part 264 of this chapter, except as provided otherwise by this subpart:
    (i) In subpart A (General), 264.4;
    (ii) In subpart B (General facility standards), Sections 264.11-264.18;
    (iii) In subpart C (Preparedness and prevention), Sections 264.31-264.37;
    (iv) In subpart D (Contingency plan and emergency procedures), Sections 264.51-264.56;
    (v) In subpart E (Manifest system, recordkeeping, and reporting), the applicable provisions of Sections 264.71-264.77;
    (vi) In subpart F (Corrective Action), Sections 264.90 and 264.101;
    (vii) In subpart G (Closure and post-closure), Sections 264.111-264.115;
    (viii) In subpart H (Financial requirements), Sections 264.141, 264.142, 264.143, and 264.147-264.151, except that States and the Federal government are exempt from the requirements of subpart H; and
    (ix) Subpart BB (Air emission standards for equipment leaks), except Section 264.1050(a).
(b) "Hazardous waste analysis."
  (1) The owner or operator must provide an analysis of the hazardous waste that quantifies the concentration of any constituent identified in Appendix VIII of Part 261 of this chapter that may reasonably be expected to

be in the waste. Such constituents must be identified and quantified if present, at levels detectable by analytical procedures prescribed by Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (incorporated by reference, see Section 260.11 of this chapter). Alternative methods that meet or exceed the method performance capabilities of SW-846 methods may be used. If SW-846 does not prescribe a method for a particular determination, the owner or operator shall use the best available method. The Appendix VIII, part 261 constituents excluded from this analysis must be identified and the basis for their exclusion explained. This analysis will be used to provide all information required by this subpart and Section 270.22 and Section 270.66 of this chapter and to enable the permit writer to prescribe such permit conditions as necessary to protect human health and the environment. Such analysis must be included as a portion of the part B permit application, or, for facilities operating under the interim status standards of this subpart, as a portion of the trial burn plan that may be submitted before the Part B application under provisions of Section 270.66(g) of this chapter as well as any other analysis required by the permit authority in preparing the permit. Owners and operators of boilers and industrial furnaces not operating under the interim status standards must provide the information required by Sections 270.22 or 270.66(c) of this chapter in the part B application to the greatest extent possible.

(2) Throughout normal operation, the owner or operator must conduct sampling and analysis as necessary to ensure that the hazardous waste, other fuels, and industrial furnace feedstocks fired into the boiler or industrial furnace are within the physical and chemical composition limits specified in the permit.

(c) "Emissions standards." Owners and operators must comply with emissions standards provided by Sections 266.104 through 266.107.

(d) "Permits."

(1) The owner or operator may burn only hazardous wastes specified in the facility permit and only under the operating conditions specified under paragraph (e) of this section, except in approved trial burns under the conditions specified in Section 270.66 of this chapter.

(2) Hazardous wastes not specified in the permit may not be burned until operating conditions have been specified under a new permit or permit modification, as applicable. Operating requirements for new wastes may be based on either trial burn results or alternative data included with part B of a permit application under Section 270.22 of this chapter.

(3) Boilers and industrial furnaces operating under the interim status standards of Section 266.103 are permitted under procedures provided by Section 270.66(g) of this chapter.

(4) A permit for a new boiler or industrial furnace (those boilers and industrial furnaces not operating under the interim status standards) must establish appropriate conditions for each of the applicable requirements of this section, including but not limited to allowable hazardous waste firing rates and operating conditions necessary to meet the requirements of paragraph (e) of this section, in order to comply with the following standards:

(i) For the period beginning with initial introduction of hazardous waste and ending with initiation of the trial burn, and only for the minimum time required to bring the device to a point of operational readiness to conduct a trial burn, not to exceed a duration of 720 hours operating time when burning hazardous waste, the operating requirements must be those most likely to ensure compliance with the emission standards of Sections 266.104 through 266.107, based on the Director's engineering judgment. If the applicant is seeking a waiver from a trial burn to demonstrate conformance with a particular emission standard, the operating requirements during this initial period of operation shall include those specified by the applicable provisions of Section 266.104, Section 266.105, Section 266.106, or Section 266.107. The Director may extend the duration of this period for up to 720 additional hours when good cause for the extension is demonstrated by the applicant.

(ii) For the duration of the trial burn, the operating requirements must be sufficient to demonstrate compliance with the emissions standards of Sections 266.104 through 266.107 and must be in accordance with the approved trial burn plan;

(iii) For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, submission of the trial burn results by the applicant, review of the trial burn results and modification of the facility permit by the Director to reflect the trial burn results, the operating requirements must be those most likely to ensure compliance with the emission standards Sections 266.104 through 266.107 based on the Director's engineering judgment.

(iv) For the remaining duration of the permit, the operating requirements must be those demonstrated in a trial burn or by alternative data specified in Section 270.22 of this chapter, as sufficient to ensure compliance with the emissions standards of Sections 266.104 through 266.107.

(e) "Operating requirements--"

(1) "General." A boiler or industrial furnace burning hazardous waste must be operated in accordance with the operating requirements specified in the permit at all times when there is hazardous waste in the unit.

(2) "Requirements to ensure compliance with the organic emissions standards--"

(i) "DRE standard." Operating conditions will be specified either on a case-by-case basis for each hazardous waste burned as those demonstrated (in a trial burn or by alternative data as specified in Section 270.22) to be sufficient to comply with the destruction and removal efficiency (DRE) performance standard of Section 266.104(a) or as those special operating requirements provided by Section 266.104(a)(4) for the waiver of the DRE trial burn. When the DRE trial burn is not waived under Section 266.104(a)(4), each set of operating requirements will specify the composition of the hazardous waste (including acceptable variations in the physical and chemical properties of the hazardous waste which will not affect compliance with the DRE performance standard) to which the operating requirements apply. For each such hazardous waste, the permit will specify acceptable operating limits including, but not limited to, the following conditions as appropriate:

(A) Feed rate of hazardous waste and other fuels measured and specified as prescribed in paragraph (e)(6) of this section;

(B) Minimum and maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in paragraph (e)(6) of this section;

(C) Appropriate controls of the hazardous waste firing system;

(D) Allowable variation in boiler and industrial furnace system design or operating procedures;

(E) Minimum combustion gas temperature measured at a location indicative of combustion chamber temperature, measured and specified as prescribed in paragraph (e)(6) of this section;

(F) An appropriate indicator of combustion gas velocity, measured and specified as prescribed in paragraph (e)(6) of this section, unless documentation is provided under Section 270.66 of this chapter demonstrating adequate combustion gas residence time; and

(G) Such other operating requirements as are necessary to ensure that the DRE performance standard of Section 266.104(a) is met.

(ii) "Carbon monoxide and hydrocarbon standards." The permit must incorporate a carbon monoxide (CO) limit and, as appropriate, a hydrocarbon (HC) limit as provided by paragraphs (b), (c), (d), (e) and (f) of Section 266.104. The permit limits will be specified as follows:

(A) When complying with the CO standard of Section 266.104(b)(1), the permit limit is 100 ppmv;

(B) When complying with the alternative CO standard under Section 266.104(c), the permit limit for CO is based on the trial burn and is established as the average over all valid runs of the highest hourly rolling average CO level of each run, and the permit limit for HC is 20 ppmv (as defined in Section 266.104(c)(1)), except as provided in Section 266.104(f).

(C) When complying with the alternative HC limit for industrial furnaces under Section 266.104(f), the permit limit for HC and CO is the baseline level when hazardous waste is not burned as specified by that paragraph.

(iii) "Start-up and shut-down." During start-up and shut-down of the boiler or industrial furnace, hazardous waste (except waste fed solely as an ingredient under the Tier I (or adjusted Tier I) feed rate screening limits for metals and chloride/chlorine, and except low risk waste exempt from the trial burn requirements under Sections 266.104(a)(5), 266.105, 266.106, and 266.107) must not be fed into the device unless the device is operating within the conditions of operation specified in the permit.

(3) "Requirements to ensure conformance with the particulate standard."

(i) Except as provided in paragraphs (e)(3)(ii) and (iii) of this section, the permit shall specify the following operating requirements to ensure conformance with the particulate standard specified in Section 266.105:

(A) Total ash feed rate to the device from hazardous waste, other fuels, and industrial furnace feedstocks, measured and specified as prescribed in paragraph (e)(6) of this section;

(B) Maximum device production rate when producing normal product expressed in appropriate units, and measured and specified as prescribed in paragraph (e)(6) of this section;

(C) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

(D) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and

(E) Such other operating requirements as are necessary to ensure that the particulate standard in Section 266.111(b) is met.

(ii) Permit conditions to ensure conformance with the particulate matter standard shall not be provided for facilities exempt from the particulate matter standard under Section 266.105(b);

(iii) For cement kilns and light-weight aggregate kilns, permit conditions to ensure compliance with the particulate standard shall not limit the ash content of hazardous waste or other feed materials.

(4) "Requirements to ensure conformance with the metals emissions standard."

(i) For conformance with the Tier I (or adjusted Tier I) metals feed rate screening limits of paragraphs (b) or (e) of Section 266.106, the permit shall specify the following operating requirements:

(A) Total feed rate of each metal in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified under provisions of paragraph (e)(6) of this section;

(B) Total feed rate of hazardous waste measured and specified as prescribed in paragraph (e)(6) of this section;

(C) A sampling and metals analysis program for the hazardous waste, other fuels, and industrial furnace feedstocks;

(ii) For conformance with the Tier II metals emission rate screening limits under Section 266.106(c) and the Tier III metals controls under Section 266.106(d), the permit shall specify the following operating requirements;

(A) Maximum emission rate for each metal specified as the average emission rate during the trial burn;

(B) Feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in paragraph (e)(6)(i) of this section;

(C) Feed rate of each metal in the following feedstreams, measured and specified as prescribed in paragraphs (e)(6) of this section:

(1) Total feed streams;

(2) Total hazardous waste feed; and

(3) Total pumpable hazardous waste feed;

(D) Total feed rate of chlorine and chloride in total feed streams measured and specified as prescribed in paragraph (e)(6) of this section;

(E) Maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in paragraph (e)(6) of this section;

(F) Maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in paragraph (e)(6) of this section;

(G) Maximum device production rate when producing normal product expressed in appropriate unite and measured and specified as prescribed in paragraph (e)(6) of this section;

(H) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;

(I) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and

(J) Such other operating requirements as are necessary to ensure that the metals standards under Sections 266.106(c) or 266.106(d) are met.

(iii) For conformance with an alternative implementation approach approved by the Director under Section 266.106(f), the permit will specify the following operating requirements:

(A) Maximum emission rate for each metal specified as the average emission rate during the trial burn;

(B) Feed rate of total hazardous waste and pumpable hazardous waste, each measured and specified as prescribed in paragraph (e)(6)(i) of this section;

(C) Feed rate of each metal in the following feedstreams, measured and specified as prescribed in paragraph (e)(6) of this section:

(1) Total hazardous waste feed; and

(2) Total pumpable hazardous waste feed;

(D) Total feed rate of chlorine and chloride in total feed streams measured and specified prescribed in paragraph (e)(6) of this section;

(E) Maximum combustion gas temperature measured at a location indicative of combustion chamber temperature, and measured and specified as prescribed in paragraph (e)(6) of this section;

(F) Maximum flue gas temperature at the inlet to the particulate matter air pollution control system measured and specified as prescribed in paragraph (e)(6) of this section;
(G) Maximum device production rate when producing normal product expressed in appropriate units and measured and specified as prescribed in paragraph (e)(6) of this section;
(H) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;
(I) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and
(J) Such other operating requirements as are necessary to ensure that the metals standards under Sections 266.106(c) or 266.106(d) are met.

(5) "Requirements to ensure conformance with the hydrogen chloride and chlorine gas standards." (i) For conformance with the Tier I total chloride and chlorine feed rate screening limits of Section 266.107(b)(1), the permit will specify the following operating requirements:
(A) Feed rate of total chloride and chlorine in hazardous waste, other fuels, and industrial furnace feedstocks measured and specified as prescribed in paragraph (e)(6) of this section;
(B) Feed rate of total hazardous waste measured and specified as prescribed in paragraph (e)(6) of this section;
(C) A sampling and analysis program for total chloride and chlorine for the hazardous waste, other fuels, and industrial furnace feedstocks;

(ii) For conformance with the Tier II HCl and Cl_2 emission rate screening limits under Section 266.107(b)(2) and the Tier III HCl and Cl_2 controls under Section 266.107(c), the permit will specify the following operating requirements:
(A) Maximum emission rate for HCl and for Cl_2 specified as the average emission rate during the trial burn;
(B) Feed rate of total hazardous waste measured and specified as prescribed in paragraph (e)(6) of this section;
(C) Total feed rate of chlorine and chloride in total feed streams, measured and specified as prescribed in paragraph (e)(6) of this section;
(D) Maximum device production rate when producing normal product expressed in appropriate units, measured and specified as prescribed in paragraph (e)(6) of this section;
(E) Appropriate controls on operation and maintenance of the hazardous waste firing system and any air pollution control system;
(F) Allowable variation in boiler and industrial furnace system design including any air pollution control system or operating procedures; and
(G) Such other operating requirements as are necessary to ensure that the HCl and Cl_2 standards under Section 266.107 (b)(2) or (c) are met.

(6) "Measuring parameters and establishing limits based on trial burn data--"
(i) "General requirements". As specified in paragraphs (e)(2) through (e)(5) of this section, each operating parameter shall be measured, and permit limits on the parameter shall be established, according to either of the following procedures:
(A) "Instantaneous limits." A parameter may be measured and recorded on an instantaneous basis (i.e., the value that occurs at any time) and the permit limit specified as the time-weighted average during all valid runs of the trial burn; or
(B) "Hourly rolling average."
(1) The limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:
(i) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.
(ii) An hourly rolling average is the arithmetic mean of the 60 most recent 1-minute average values recorded by the continuous monitoring system.
(2) The permit limit for the parameter shall be established based on trial burn data as the average over all valid test runs of the highest hourly rolling average value for each run.

(ii) "Rolling average limits for carcinogenic metals and lead." Feed rate limits for the carcinogenic metals (i.e., arsenic, beryllium, cadmium and chromium) and lead may be established either on an hourly rolling average basis as prescribed by paragraph (e)(6)(i) of this section or on (up to) a 24

hour rolling average basis. If the owner or operator elects to use an average period from 2 to 24 hours:

(A) The feed rate of each metal shall be limited at any time to ten times the feed rate that would be allowed on an hourly rolling average basis;

(B) The continuous monitor shall meet the following specifications:

(1) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

(2) The rolling average for the selected averaging period is defined as the arithmetic mean of one hour block averages for the averaging period. A one hour block average is the arithmetic mean of the one minute averages recorded during the 60-minute period beginning at one minute after the beginning of preceding clock hour; and

(C) The permit limit for the feed rate of each metal shall be established based on trial burn data as the average over all valid test runs of the highest hourly rolling average feed rate for each run.

(iii) "Feed rate limits for metals, total chloride and chlorine, and ash." Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (i.e., metals, chloride/chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream must be monitored under the continuous monitoring requirements of paragraphs (e)(6)(i) and (ii) of this section.

(iv) "Conduct of trial burn testing."

(A) If compliance with all applicable emissions standards of Sections 266.104 through 266.107 is not demonstrated simultaneously during a set of test runs, the operating conditions of additional test runs required to demonstrate compliance with remaining emissions standards must be as close as possible to the original operating conditions.

(B) Prior to obtaining test data for purposes of demonstrating compliance with the emissions standards of Sections 266.104 through 266.107 or establishing limits on operating parameters under this section, the facility must operate under trial burn conditions for a sufficient period to reach steady-state operations. The Director may determine, however, that industrial furnaces that recycle collected particulate matter back into the furnace and that comply with an alternative implementation approach for metals under Section 266.106(f), need not reach steady state conditions with respect to the flow of metals in the system prior to beginning compliance testing for metals emissions.

(C) Trial burn data on the level of an operating parameter for which a limit must be established in the permit must be obtained during emissions sampling for the pollutant(s) (i.e., metals, PM, HCl/Cl_2, organic compounds) for which the parameter must be established as specified by paragraph (e) of this section.

(7) "General requirements" --

(i) "Fugitive emissions." Fugitive emissions must be controlled by:

(A) Keeping the combustion zone totally sealed against fugitive emissions; or

(B) Maintaining the combustion zone pressure lower than atmospheric pressure; or

(C) An alternate means of control demonstrated (with part B of the permit application) to provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure.

(ii) "Automatic waste feed cutoff." A boiler or industrial furnace must be operated with a functioning system that automatically cuts off the hazardous waste feed when operating conditions deviate from those established under this section. The Director may limit the number of cutoffs per an operating period on a case-by-case basis. In addition:

(A) The permit limit for (the indicator of) minimum combustion chamber temperature must be maintained while hazardous waste or hazardous waste residues remain in the combustion chamber;

(B) Exhaust gases must be ducted to the air pollution control system operated in accordance with the permit requirements while hazardous waste or hazardous waste residues remain in the combustion chamber; and

(C) Operating parameters for which permit limits are established must continue to be monitored during the cutoff, and the hazardous waste feed shall not be restarted until the levels of

those parameters comply with the permit limits. For parameters that may be monitored on an instantaneous basis, the Director will establish a minimum period of time after a waste feed cutoff during which the parameter must not exceed the permit limit before the hazardous waste feed may be restarted.

(iii) "Changes." A boiler or industrial furnace must cease burning hazardous waste when changes in combustion properties, or feed rates of the hazardous waste, other fuels, or industrial furnace feedstocks, or changes in the boiler or industrial furnace design or operating conditions deviate from the limits as specified in the permit.

(8) "Monitoring and Inspections."

(i) The owner or operator 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 (CO), hydrocarbons (HC), 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 specified in paragraph (e)(2)(ii) of this section. CO, HC, and oxygen monitors must be installed, operated, and maintained in accordance with methods specified in Appendix IX of this part.

(C) Upon the request of the Director, sampling and analysis of the hazardous waste (and other fuels and industrial furnace feedstocks as appropriate), residues, and exhaust emissions must be conducted to verify that the operating requirements established in the permit achieve the applicable standards of Sections 266.104, 266.105, 266.106, and 266.107.

(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 (pumps, values, pipes, fuel storage tanks, etc.) must be subjected to thorough visual inspection when it contains hazardous waste, at least daily for leaks, spills, fugitive emissions, and signs of tampering.

(iv) The automatic hazardous waste feed cutoff system and associated alarms must be tested at least once every 7 days when hazardous waste is burned to verify operability, unless the applicant demonstrates to the Director that weekly inspections will unduly restrict or upset operations and that less frequent inspections will be adequate. At a minimum, operational testing must be conducted at least once every 30 days.

(v) These monitoring and inspection data must be recorded and the records must be placed in the operating record required by Section 264.73 of this chapter.

(9) "Direct transfer to the burner." If hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit, the owner and operator must comply with Section 266.111.

(10) "Recordkeeping." The owner or operator must keep in the operating record of the facility all information and data required by this section until closure of the facility.

(11) "Closure." At closure, the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the boiler or industrial furnace.

266.103 Interim Status Standards for Burners.

(a) Purpose, scope, applicability.

(1) "General."

(i) The purpose of this section is to establish minimum national standards for owners and operators of "existing" boilers and industrial furnaces that burn hazardous waste where such standards define the acceptable management of hazardous waste during the period of interim status. The standards of this section apply to owners and operators of existing facilities until either a permit is issued under Section 266.102(d) or until closure responsibilities identified in this section are fulfilled.

(ii) "Existing or in existence" means a boiler or industrial furnace that on or before August 21, 1991 is either in operation burning or processing hazardous waste or for which construction (including the ancillary facilities to burn or to process the hazardous waste) has commenced. A facility has commenced construction if the owner or operator has obtained the Federal, State, and local approvals or permits necessary to begin physical construction; and either:

(A) A continuous on-site, physical construction program has begun; or

(B) The owner or operator has entered into contractual obligations--which cannot be canceled or modified without substantial loss--for physical construction of the facility to be completed within a reasonable time.

(iii) If a boiler or industrial furnace is located at a facility that already has a permit or interim status, then the facility must comply with the applicable regulations dealing with permit modifications in Section 270.42 or changes in interim status in Section 270.72 of this chapter.

(2) "Exemptions." The requirements of this section do not apply to hazardous waste and facilities exempt under Sections 266.100(b), or 266.108.

(3) "Prohibition on burning dioxin-listed wastes." The following hazardous waste listed for dioxin and hazardous waste derived from any of these wastes may not be burned in a boiler or industrial furnace operating under interim status: F020, F021, F022, F023, F026, or F027.

(4) "Applicability of part 265 standards." Owners and operators of boilers and industrial furnaces that burn hazardous waste and are operating under interim status are subject to the following provisions of part 265 of this chapter, except as provided otherwise by this section:

(i) In subpart A (General), Section 265.4;

(ii) In subpart B (General facility standards), Sections 265.11-265.17;

(iii) In subpart C (Preparedness and prevention), Sections 265.31-265.37;

(iv) In subpart D (Contingency plan and emergency procedures), Sections 265.51-265.56;

(v) In subpart E (Manifest system, recordkeeping, and reporting), Sections 265.71-265.77, except that Sections 265.71, 265.72, and 265.76 do not apply to owners and operators of on-site facilities that do not receive any hazardous waste from off-site sources;

(vi) In subpart G (Closure and post-closure), Sections 265.111-265.115;

(vii) In subpart H (Financial requirements), Sections 265.141, 265.142, 265.143, and 265.147-265.151, except that States and the Federal government are exempt from the requirements of subpart H; and

(viii) Subpart BB (Air emission standards for equipment leaks), except Section 265.1050(a).

(5) "Special requirements for HC monitoring systems." When an owner or operator is required to comply with the hydrocarbon (HC) controls provided by Section 266.104(c) or paragraph (a)(5)(i)(D) of this section, a conditioned gas monitoring system may be used in conformance with specifications provided in appendix IX of this part provided that the owner or operator submits a certification of compliance without using extensions of time provided by paragraph (c)(7) of this section.

(i) "Controls."

(A) The hazardous waste shall be fed at a location where combustion gas temperatures are at least 1800 degrees F.;

(B) The owner or operator must determine that adequate oxygen is present in combustion gases to combust organic constituents in the waste and retain documentation of such determination in the facility record;

(C) For cement kiln systems, the hazardous waste shall be fed into the kiln; and

(D) The hydrocarbon controls of Section 266.104(c) or paragraph (c)(5) of this section apply upon certification of compliance under paragraph (c) of this section irrespective of the CO level achieved during the compliance test.

(ii) "Burning hazardous waste solely as an ingredient." A hazardous waste is burned for a purpose other than solely as an ingredient if it meets either of these criteria:

(A) The hazardous waste has a total concentration of nonmetal compounds listed in part 261, Appendix VIII, of this chapter exceeding 500 ppm by weight, as-fired, and so is considered to be burned for destruction. The concentration of nonmetal compounds in a waste as generated may be reduced to the 500 ppm limit by bona fide treatment that removes or destroys nonmetal constituents. Blending for dilution to meet the 500 ppm limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the facility record; or

(B) The hazardous waste has a heating value of 5,000 Btu/lb or more, as-fired, and so is considered to be burned as fuel. The heating value of a waste as generated may be reduced to below the 5,000 Btu/lb limit by bona fide treatment that removes or destroys organic constituents. Blending to augment the heating value to meet the 5,000 Btu/lb limit is prohibited and documentation that the waste has not been impermissibly blended must be retained in the facility record.

(6) "Restrictions on burning hazardous waste that is not a fuel." Prior to certification of compliance under paragraph (c) of this section, owners and operators shall not feed hazardous waste 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; however, blending to augment the heating

value to meet the 5,000 Btu/lb limit is prohibited and records must be kept to document that impermissible blending has not occurred) in a boiler or industrial furnace, except that:

(i) Hazardous waste may be burned solely as an ingredient; or

(ii) Hazardous waste may be burned for purposes of compliance testing (or testing prior to compliance testing) for a total period of time not to exceed 720 hours; or

(iii) Such waste may be burned if the Director has documentation to show that, prior to August 21, 1991:

(A) The boiler or industrial furnace is operating under the interim status standards for incinerators provided by subpart O of part 265 of this chapter, or the interim status standards for thermal treatment units provided by subpart P of part 265 of this chapter; and

(B) The boiler or industrial furnace met the interim status eligibility requirements under Section 270.70 of this chapter for subpart O or subpart P of part 265 of this chapter; and

(C) Hazardous waste with a heating value less than 5,000 Btu/lb was burned prior to that date; or

(iv) Such waste may be burned in a halogen acid furnace if the waste was burned as an excluded ingredient under Section 261.2(e) of this chapter prior to February 21, 1991 and documentation is kept on file supporting this claim.

(7) "Direct transfer to the burner." If hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit, the owner and operator must comply with Section 266.111.

(b) "Certification of precompliance--"

(1) "General." The owner or operator must provide complete and accurate information specified in paragraph (b)(2) of this section to the Director on or before August 21, 1991, and must establish limits for the operating parameters specified in paragraph (b)(3) of this section. Such information is termed a "certification of precompliance" and constitutes a certification that the owner or operator has determined that, when the facility is operated within the limits specified in paragraph (b)(3) of this section, the owner or operator believes that, using best engineering judgment, emissions of particulate matter, metals, and HCl and Cl_2 are not likely to exceed the limits provided by Sections 266.105, 266.106, and 266.107. The facility may burn hazardous waste only under the operating conditions that the owner or operator establishes under paragraph (b)(3) of this section until the owner or operator submits a revised certification of precompliance under paragraph (b)(8) of this section or a certification of compliance under paragraph (c) of this section, or until a permit is issued.

(2) "Information required." The following information must be submitted with the certification of precompliance to support the determination that the limits established for the operating parameters identified in paragraph (b)(3) of this section are not likely to result in an exceedance of the allowable emission rates for particulate matter, metals, and HCl and Cl_2:

(i) General facility information:

(A) EPA facility ID number;

(B) Facility name, contact person, telephone number, and address;

(C) Description of boilers and industrial furnaces burning hazardous waste, including type and capacity of device;

(D) A scaled plot plan showing the entire facility and location of the boilers and industrial furnaces burning hazardous waste; and

(E) A description of the air pollution control system on each device burning hazardous waste, including the temperature of the flue gas at the inlet to the particulate matter control system.

(ii) Except for facilities complying with the Tier I or Adjusted Tier I feed rate screening limits for metals or total chlorine and chloride provided by Sections 266.106(b) or (e) and 266.107(b)(1) or (e), respectively, the estimated uncontrolled (at the inlet to the air pollution control system) emissions of particulate matter, each metal controlled by Section 266.106, and hydrogen chloride and chlorine, and the following information to support such determinations:

(A) The feed rate (lb/hr) of ash, chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver and thallium in each feedstream (hazardous waste, other fuels, industrial furnace feedstocks);

(B) The estimated partitioning factor to the combustion gas for the materials identified in paragraph (b)(2)(ii)(A) of this section and the basis for the estimate and an estimate of the partitioning to HCl and Cl_2 of total chloride and chlorine in feed materials. To estimate the partitioning factor, the owner or operator must use either best engineering judgment or the procedures specified in Appendix IX of this part.

(C) For industrial furnaces that recycle collected particulate matter (PM) back into the furnace and that will certify compliance with the metals emissions standards under paragraph (c)(3)(ii)(A), the estimated enrichment factor for each metal. To estimate the enrichment factor, the owner or operator must use either best engineering judgment or the procedures specified in "Alternative Methodology for Implementing Metals Controls" in Appendix IX of this part.

(D) If best engineering judgment is used to estimate partitioning factors or enrichment factors under paragraphs (b)(2)(ii)(B) or (b)(2)(ii)(C) respectively, the basis for the judgment. When best engineering judgment is used to develop or evaluate data or information and make determinations under this section, the determinations must be made by a qualified, registered professional engineer and a certification of his/her determinations in accordance with Section 270.11(d) of this chapter must be provided in the certification of precompliance.

(iii) For facilities complying with the Tier I or Adjusted Tier I feed rate screening limits for metals or total chlorine and chloride provided by Sections 266.106(b) or (e) and 266.107(b)(1) or (e), the feed rate (lb/hr) of total chloride and chlorine, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium in each feed stream (hazardous waste, other fuels, industrial furnace feedstocks).

(iv) For facilities complying with the Tier II or Tier III emission limits for metals or HCl and Cl_2 (under Sections 266.106 (c) or (d) or 266.107(b) or (c)), the estimated controlled (outlet of the air pollution control system) emissions rates of particulate matter, each metal controlled by Section 266.106, and HCl and Cl_2, and the following information to support such determinations:

(A) The estimated air pollution control system (APCS) removal efficiency for particulate matter, HCl, Cl_2 antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium.

(B) To estimate APCS removal efficiency, the owner or operator must use either best engineering judgment or the procedures prescribed in Appendix IX of this part.

(C) If best engineering judgment is used to estimate APCS removal efficiency, the basis for the judgment. Use of best engineering judgment must be in conformance with provisions of paragraph (b) (2)(ii)(D) of this section.

(v) Determination of allowable emissions rates for HCl, Cl_2, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium, and the following information to support such determinations:

(A) For all facilities:

(1) Physical stack height;
(2) Good engineering practice stack height as defined by 40 CFR 51.100(ii);
(3) Maximum flue gas flow rate;
(4) Maximum flue gas temperature;
(5) Attach a US Geological Service topographic map (or equivalent) showing the facility location and surrounding land within 5 km of the facility;
(6) Identify terrain type: complex or noncomplex; and
(7) Identify land use: urban or rural.

(B) For owners and operators using Tier III site specific dispersion modeling to determine allowable levels under Section 266.106(d) or Section 266.107(c), or adjusted Tier I feed rate screening limits under Sections 266.106(e) or 266.107(e):

(1) Dispersion model and version used;
(2) Source of meterological data;
(3) The dilution factor in micrograms per cubic meter per gram per second of emissions for the maximum annual average off-site (unless on-site is required) ground level concentration (MEI location); and
(4) Indicate the MEI location on the map required under paragraph (b)(2)(v)(A)(5);

(vi) For facilities complying with the Tier II or III emissions rate controls for metals or HCl and Cl2, a comparison of the estimated controlled emissions rates determined under paragraph (b)(2)(iv) with the allowable emission rates determined under paragraph (b)(2)(v);

(vii) For facilities complying with the Tier I (or adjusted Tier I) feed rate screening limits for metals or total chloride and chlorine, a comparison of actual feed rates of each metal and total chlorine and chloride determined under paragraph (b)(2)(iii) of this section to the Tier I allowable feed rates; and

(viii) For industrial furnaces that feed hazardous waste for any purpose other than solely as an ingredient (as defined by paragraph (a)(5)(ii) of this section) at any location other than the product discharge end of the device, documentation of compliance with the requirements of paragraphs (a)(5)(i)(A), (B), and (C) of this section.

(ix) For industrial furnaces that recycle collected particulate matter (PM) back into the furnace and that will certify compliance with the metals emissions standards under paragraph (c)(3)(ii) (A) of this section:

(A) The applicable particulate matter standard in lb/hr; and

(B) The precompliance limit on the concentration of each metal in collected PM.

(3) "Limits on operating conditions."

The owner and operator shall establish limits on the following parameters consistent with the determinations made under paragraph (b)(2) of this section and certify (under provisions of paragraph (b)(9) of this section) to the Director that the facility will operate within the limits during interim status when there is a hazardous waste in the unit until revised certification of precompliance under paragraph (b)(8) of this section or certification of compliance under paragraph (c) of this section:

(i) Feed rate of total hazardous waste and (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e)) pumpable hazardous waste;

(ii) Feed rate of each metal in the following feed streams:

(A) Total feed streams, except that industrial furnaces that comply with the alternative metals implementation approach under paragraph (b)(4) of this section must specify limits on the concentration of each metal in collected particulate matter in lieu of feed rate limits for total feedstreams;

(B) Total hazardous waste feed, unless complying with the Tier I or Adjusted Tier I metals feed rate screening limits under Section 266.100(b) of (e); and

(C) Total pumpable hazardous waste feed, unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106 (b) or (e);

(iii) Total feed rate of chlorine and chloride in total feed streams;

(iv) Total feed rate of ash in total feed streams, except that the ash feed rate for cement kilns and light-weight aggregate kilns is not limited; and

(v) Maximum production rate of the device in appropriate units when producing normal product, unless complying with the Tier I or Adjusted Tier I feed rate screening limits for chlorine under Section 266.107(b)(1) or (e) and for all metals under Section 266.106(b) or (e), and the uncontrolled particulate emissions do not exceed the standard under Section 266.105.

(4) "Operating requirements for furnaces that recycle PM." Owners and operators of furnaces that recycle collected particulate matter (PM) back into the furnace and that will certify compliance with the metals emissions controls under paragraph (c)(3)(ii)(A) of this section must comply with the special operating requirements provided in "Alternative Methodology for Implementing Metals Controls" in Appendix IX of this part.

(5) "Measurement of feed rates and production rate--"

(i) "General requirements."

Limits on each of the parameters specified in paragraph (b)(3) of this section (except for limits on metals concentrations in collected particulate matter (PM) for industrial furnaces that recycle collected PM) shall be established and continuously monitored under either of the following methods:

(A) "Instantaneous limits." A limit for a parameter may be established and continuously monitored on an instantaneous basis (i.e., the value that occurs at any time) not to be exceeded at any time; or

(B) "Hourly rolling average limits." A limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:

(1) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

(2) An hourly rolling average is the arithmetic mean of the 60 most recent 1-minute average values recorded by the continuous monitoring system.

(ii) "Rolling average limits for carcinogenic metals and lead." Feed rate limits for the carcinogenic metals (arsenic, beryllium, cadmium, and chromium) and lead may be established either on an hourly rolling average basis as prescribed by paragraph (b)(5)(i)(B) or on (up to) a 24 hour rolling average basis. If the owner or operator elects to use an averaging period from 2 to 24 hours:

(A) The feed rate of each metal shall be limited at any time to ten times the feed rate that would be allowed on a hourly rolling average basis;

(B) The continuous monitor shall meet the following specifications:

(1) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

(2) The rolling average for the selected averaging period is defined as the arithmetic mean of one hour block averages for the averaging period. A one hour block average is the arithmetic mean of the one minute averages recorded during the 60-minute period beginning at one minute after the beginning of preceding clock hour.

(iii) "Feed rate limits for metals, total chloride and chlorine, and ash." Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (i.e., metals, chloride/chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream must be monitored under the continuous monitoring requirements of paragraphs (b)(5)(i) and (ii) of this section.

(6) "Public notice requirements at precompliance." On or before August 21, 1991, (the effective date of this rule), the owner or operator must submit a notice with the following information for publication in a major local newspaper of general circulation and send a copy of the notice to the appropriate units of State and local government. The owner and operator must provide to the Director with the certification of precompliance evidence of submitting the notice for publication. The notice, which shall be entitled "Notice of Certification of Precompliance with Hazardous Waste Burning Requirements of 40 CFR 266.103(b)", must include:

(i) Name and address of the owner and operator of the facility as well as the location of the device burning hazardous waste;

(ii) Date that the certification of precompliance is submitted to the Director;

(iii) Brief description of the regulatory process required to comply with the interim status requirements of this section including required emissions testing to demonstrate conformance with emissions standards for organic compounds, particulate matter, metals, and HCl and Cl_2;

(iv) Types and quantities of hazardous waste burned including, but not limited to, source, whether solids or liquids, as well as an appropriate description of the waste;

(v) Type of device(s) in which the hazardous waste is burned including a physical description and maximum production rate of each device;

(vi) Types and quantities of other fuels and industrial furnace feedstocks fed to each unit;

(vii) Brief description of the basis for this certification of precompliance as specified in paragraph (b)(2) of this section;

(viii) Locations where the record for the facility can be viewed and copied by interested parties. These records and locations shall at a minimum include:

(A) The administrative record kept by the Agency office where the supporting documentation was submitted or another location designated by the Director; and

(B) The BIF correspondence file kept at the facility site where the device is located;

The correspondence file must include all correspondence between the facility and the Director, state and local regulatory officials, including copies of all certifications and notifications, such as the precompliance certification, precompliance public notice, notice of compliance testing, compliance test report, compliance certification, time extension requests and approvals or denials, enforcement notifications of violations, and copies of EPA and State site visit reports submitted to the owner or operator.

(ix) Notification of the establishment of a facility mailing list whereby interested parties shall notify the Agency that they wish to be placed on the mailing list to receive future information and notices about this facility; and

(x) Location (mailing address) of the applicable EPA Regional Office, Hazardous Waste Division, where further information can be obtained on EPA regulation of hazardous waste burning.

(7) "Monitoring other operating parameters." When the monitoring systems for the operating parameters listed in paragraphs (c)(1)(v through xiii) of this section are installed and operating in conformance with vendor specifications or (for CO, HC, and oxygen) specifications provided by Appendix IX of this part, as appropriate, the parameters shall be continuously monitored and records shall be maintained in the operating record.

(8) "Revised certification of precompliance." The owner or operator may revise at any time the information and operating conditions documented under paragraphs (b)(2) and (b)(3) of this section in the certification

of precompliance by submitting a revised certification of precompliance under procedures provided by those paragraphs.

(i) The public notice requirements of paragraph (b)(6) of this section do not apply to recertifications.

(ii) The owner and operator must operate the facility within the limits established for the operating parameters under paragraph (b)(3) of this section until a revised certification is submitted under this paragraph or a certification of compliance is submitted under paragraph (c) of this section.

(9) "Certification of precompliance statement." The owner or operator must include the following signed statement with the certification of precompliance submitted to the Director:

"I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation. Copies of all emissions tests, dispersion modeling results and other information used to determine conformance with the requirements of Section 266.103(b) are available at the facility and can be obtained from the facility contact person listed above. Based on my inquiry of the person or persons who manages the facility, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also acknowledge that the operating limits established in this certification pursuant to Section 266.103(b)(3) and (4) are enforceable limits at which the facility can legally operate during interim status until: (1) A revised certification of precompliance is submitted, (2) a certification of compliance is submitted, or (3) an operating permit is issued."

(c) "Certification of compliance." The owner or operator shall conduct emissions testing to document compliance with the emission standards of Sections 266.104(b) through (e), 266.105, 266.106, 266.107, and paragraph (a)(5)(i)(D) of this section, under the procedures prescribed by this paragraph, except under extensions of time provided by paragraph (c)(7). Based on the compliance test, the owner or operator shall submit to the Director, on or before August 21, 1992, a complete and accurate "certification of compliance" (under paragraph (c)(4) of this section) with those emission standards establishing limits on the operating parameters specified in paragraph (c)(1).

(1) "Limits on operating conditions." The owner or operator shall establish limits on the following parameters based on operations during the compliance test (under procedures prescribed in paragraph (c)(4)(iv) of this section) or as otherwise specified and include these limits with the certification of compliance. The boiler or industrial furnace must be operated in accordance with these operating limits and the applicable emissions standards of Sections 266.104(b) through (e), 266.105, 266.106, 266.107, and 266.103(a)(5)(i)(D) at all times when there is hazardous waste in the unit.

(i) Feed rate of total hazardous waste and (unless complying the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e)), pumpable hazardous waste;

(ii) Feed rate of each metal in the following feedstreams:

(A) Total feedstreams, except that:

(1) Facilities that comply with Tier I or Adjusted Tier I metals feed rate screening limits may set their operating limits at the metals feed rate screening limits determined under Section 266.106(b) or (e); and

(2) Industrial furnaces that must comply with the alternative metals implementation approach under paragraph (c)(3)(ii) of this section must specify limits on the concentration of each metal in the collected particulate matter in lieu of feed rate limits for total feedstreams:

(B) Total hazardous waste feed (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e)); and

(C) Total pumpable hazardous waste feed (unless complying with the Tier I or Adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e);

(iii) Total feed rate of chlorine and chloride in total feed streams, except that facilities that comply with Tier I or Adjusted Tier I feed rate screening limits may set their operating limits at the total chlorine and chloride feed rate screening limits determined under Section 266.107(b)(1) or (e).

(iv) Total feed rate of ash in total feed streams, except that the ash feed rate for cement kilns and light-weight aggregate kilns is not limited;

(v) Carbon monoxide concentration, and where required, hydrocarbon concentration in stack gas. When complying with the CO controls of Section 266.104(b), the CO limit is 100 ppmv, and when complying with the HC controls of Section 266.104(c), the HC limit is 20 ppmv. When complying with the CO controls of Section 266.104(c), the CO limit is established based on the compliance test;

(vi) Maximum production rate of the device in appropriate units when producing normal product, unless complying with the Tier I or Adjusted Tier I feed rate screening limits for chlorine under Section 266.107(b)(1) or (e) and for all metals under Section 266.106(b) or (e), and the uncontrolled particulate emissions do not exceed the standard under Section 266.105.

(vii) Maximum combustion chamber temperature where the temperature measurement is as close to the combustion zone as possible and is upstream of any quench water injection, (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e));

(viii) Maximum flue gas temperature entering a particulate matter control device (unless complying with Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e) and the total chlorine and chloride feed rate screening limits under Section 266.107(b) or (e));

(ix) For systems using wet scrubbers, including wet ionizing scrubbers (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106 (b) or (e) and the total chlorine and chloride feed rate screening limits under Section 266.107(b)(1) or (e));

(A) Minimum liquid to flue gas ration;

(B) Minimum scrubber blowdown from the system or maximum suspended solids content of scrubber water; and

(C) Minimum pH level of the scrubber water;

(x) For systems using venturi scrubbers, the minimum differential gas pressure across the venturi (unless complying the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e) and the total chlorine and chloride feed rate screening limits under Section 266.107(b)(1) or (e));

(xi) For systems using dry scrubbers (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e) and the total chlorine and chloride feed rate screening limits under Section 266.107(b)(1) or (e));

(A) Minimum caustic feed rate; and

(B) Maximum flue gas flow rate:

(xii) For systems using wet ionizing scrubbers or electrostatic precipitators (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e) and the total chlorine and chloride feed rate screening limits under Section 266.107(b)(1) or (e)):

(A) Minimum electrical power in kilovolt amperes (kVA) to the precipitator plates; and

(B) Maximum flue gas flow rate;

(xiii) For systems using fabric filters (baghouses), the minimum pressure drop (unless complying with the Tier I or adjusted Tier I metals feed rate screening limits under Section 266.106(b) or (e) and the total chlorine and chloride feed rate screening limits under Section 266.107(b)(1) or (e)).

(2) "Prior notice of compliance testing."

At least 30 days prior to the compliance testing required by paragraph (c)(3) of this section, the owner or operator shall notify the Director and submit the following information:

(i) General facility information including:

(A) EPA facility ID number;

(B) Facility name, contact person, telephone number, and address;

(C) Person responsible for conducting compliance test, including company name, address, and telephone number, and a statement of qualifications;

(D) Planned date of the compliance test;

(ii) Specific information on each device to be tested including:

(A) Description of boiler or industrial furnace;

(B) A scaled plot plan showing the entire facility and location of the boiler or industrial furnace;

(C) A description of the air pollution control system;

(D) Identification of the continuous emission monitors that are installed, including:

(1) Carbon monoxide monitor;

(2) Oxygen monitor;

(3) Hydrocarbon monitor, specifying the minimum temperature of the system and, if the temperature is less than 150 degrees C., an explanation of why a heated system is not used (see paragraph (c) (5) of this section) and a brief description of the sample gas conditioning system;

(E) Indication of whether the stack is shared with another device that will be in operation during the compliance test;

(F) Other information useful to an understanding of the system design or operation.

(iii) Information on the testing planned, including a complete copy of the test protocol and Quality Assurance/Quality Control (QA/QC) plan, and a summary description for each test providing the following information at a minimum:

(A) Purpose of the test (e.g., demonstrate compliance with emissions of particulate matter); and

(B) Planned operating conditions, including levels for each pertinent parameter specified in paragraph (c)(1) of this section.

(3) "Compliance testing--"

(i) "General." Compliance testing must be conducted under conditions for which the owner or operator has submitted a certification of precompliance under paragraph (b) of this section and under conditions established in the notification of compliance testing required by paragraph (c)(2) of this section. The owner or 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. To support the request, the owner or operator must provide a comparison of the hazardous waste burned and other feedstreams, and the design, operation, and maintenance of both the tested unit and the similar unit. The Director shall provide a written approval to use compliance test data in lieu of testing a similar unit if he finds that the hazardous wastes, the devices, and the operating conditions are sufficiently similar, and the data from the other compliance test is adequate to meet the requirements of Section 266.103(c).

(ii) "Special requirements for industrial furnaces that recycle collected PM." Owners and operators of industrial furnaces that recycle back into the furnace particulate matter (PM) from the air pollution control system must comply with one of the following procedures for testing to determine compliance with the metals standards of 266.106(c) or (d):

(A) The special testing requirements prescribed in "Alternative Method for Implementing Metals Controls" in Appendix IX of this part; or

(B) Stack emissions testing for a minimum of 6 hours each day while hazardous waste is burned during interim status. The testing must be conducted when burning normal hazardous waste for that day at normal feed rates for that day and when the air pollution control system is operated under normal conditions. During interim status, hazardous waste analysis for metals content must be sufficient for the owner or operator to determine if changes in metals content may affect the ability of the facility to meet the metals emissions standards established under Section 266.106(c) or (d). Under this option, operating limits (under paragraph (c)(1) of this section) must be established during compliance testing under paragraph (c)(3) of this section only on the following parameters:

(1) Feed rate of total hazardous waste;

(2) Total feed rate of chlorine and chloride in total feed streams;

(3) Total feed rate of ash in total feed streams, except that the ash feed rate for cement kilns and light-weight aggregate kilns is not limited;

(4) Carbon monoxide concentration, and where required, hydrocarbon concentration in stack gas;

(5) Maximum production rate of the device in appropriate units when producing normal product; or

(C) Conduct compliance testing to determine compliance with the metals standards to establish limits on the operating parameters of paragraph (c)(1) of this section only after the kiln system has been conditioned to enable it to reach equilibrium with respect to metals fed into the system and metals emissions. During conditioning, hazardous waste and raw materials having the same metals content as will be fed during the compliance test must be fed at the feed rates that will be fed during the compliance test.

(iii) "Conduct of compliance testing."

(A) If compliance with all applicable emissions standards of Sections 266.104 through 266.107 is not demonstrated simultaneously during a set of test runs, the operating conditions of additional test runs required to demonstrate compliance with remaining emissions standards must be as close as possible to the original operating conditions.

(B) Prior to obtaining test data for purposes of demonstrating compliance with the applicable emissions standards of Sections 266.104 through 266.107 or establishing limits on operating parameters under this section, the facility must operate under compliance test conditions for a sufficient period to reach steady-state operations. Industrial furnaces that recycle collected particulate matter back into the furnace and that comply with paragraphs (c)(3)(ii)(A) or (B) of this section, however, need not reach steady state conditions with respect to the flow of metals in the system prior to beginning compliance testing for metals.

(C) Compliance test data on the level of an operating parameter for which a limit must be established in the certification of compliance must be obtained during emissions sampling for the pollutant(s)(i.e., metals, PM, HCl/Cl_2, organic compounds) for which the parameter must be established as specified by paragraph (c)(1) of this section.

(4) "Certification of compliance."
Within 90 days of completing compliance testing, the owner or operator must certify to the Director compliance with the emissions standards of Sections 266.104(b),(c), and (e), 266.105, 266.106, 266.107, and paragraph (a)(5)(i)(D) of this section. The certification of compliance must include the following information:

(i) General facility and testing information including:
(A) EPA facility ID number;
(B) Facility name, contact person, telephone number, and address;
(C) Person responsible for conducting compliance testing, including company name, address, and telephone number, and a statement of qualifications;
(D) Date(s) of each compliance test;
(E) Description of boiler or industrial furnace tested;
(F) Person responsible for quality assurance/quality control (QA/QC), title, and telephone number, and statement that procedures prescribed in the QA/QC plan submitted under Section 266.103(c)(2)(iii) have been followed, or a description of any changes and an explanation of why changes were necessary;
(G) Description of any changes in the unit configuration prior to or during testing that would alter any of the information submitted in the prior notice of compliance testing under paragraph (c)(2) of this section, and an explanation of why the changes were necessary;
(H) Description of any changes in the planned test conditions prior to or during the testing that alter any of the information submitted in the prior notice of compliance testing under paragraph (c)(2) of this section, and an explanation of why the changes were necessary; and
(I) The complete report on results of emissions testing.

(ii) Specific information on each test including:
(A) Purpose(s) of test (e.g., demonstrate conformance with the emissions limits for particulate matter, metals, HCl, Cl_2, and CO)
(B) Summary of test results for each run and for each test including the following information:
(1) Date of run;
(2) Duration of run;
(3) Time-weighted average and highest hourly rolling average CO level for each run and for the test;
(4) Highest hourly rolling average HC level, if HC monitoring is required for each run and for the test;
(5) If dioxin and furan testing is required under Section 266.104(e), time-weighted average emissions for each run and for the test of chlorinated dioxin and furan emissions, and the predicted maximum annual average ground level concentration of the toxicity equivalency factor;
(6) Time-weighted average particulate matter emissions for each run and for the test;
(7) Time-weighted average HCl and Cl_2 emissions for each run and for the test;
(8) Time-weighted average emissions for the metals subject to regulation under Section 266.106 for each run and for the test; and
(9) QA/QC results.

(iii) Comparison of the actual emissions during each test with the emissions limits prescribed by Sections 266.104(b), (c), and (e), 266.105, 266.106, and 266.107 and established for the facility in the certification of precompliance under paragraph (b) of this section.

(iv) Determination of operating limits based on all valid runs of the compliance test for each applicable parameter listed in paragraph (c)(1) of this section using either of the following procedures:
(A) "Instantaneous limits." A parameter may be measured and recorded on an instantaneous basis (i.e., the value that occurs at any time) and the operating limit specified as the time-weighted average during all runs of the compliance test; or
(B) "Hourly rolling average basis."
(1) The limit for a parameter may be established and continuously monitored on an hourly rolling average basis defined as follows:
(i) A continuous monitor is one which continuously samples the regulated

parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

(ii) An hourly rolling average is the arithmetic mean of the 60 most recent 1-minute average values recorded by the continuous monitoring system.

(2) The operating limit for the parameter shall be established based on compliance test data as the average over all test runs of the highest hourly rolling average value for each run.

(C) "Rolling average limits for carcinogenic metals and lead." Feed rate limits for the carcinogenic metals (i.e., arsenic, beryllium, cadmium and chromium) and lead may be established either on an hourly rolling average basis as prescribed by paragraph (c)(4)(iv)(B) of this section or on (up to) a 24 hour rolling average basis. If the owner or operator elects to use an averaging period from 2 to 24 hours:

(1) The feed rate of each metal shall be limited at any time to ten times the feed rate that would be allowed on a hourly rolling average basis;

(2) The continuous monitor shall meet the following specifications:

(i) A continuous monitor is one which continuously samples the regulated parameter without interruption, and evaluates the detector response at least once each 15 seconds, and computes and records the average value at least every 60 seconds.

(ii) The rolling average for the selected averaging period is defined as arithmetic mean of one hour block averages for the averaging period. A one hour block average is the arithmetic mean of the one minute averages recorded during the 60-minute period beginning at one minute after the beginning of preceding clock hour; and

(3) The operating limit for the feed rate of each metal shall be established based on compliance test data as the average over all test runs of the highest hourly rolling average feed rate for each run.

(D) "Feed rate limits for metals, total chloride and chlorine, and ash." Feed rate limits for metals, total chlorine and chloride, and ash are established and monitored by knowing the concentration of the substance (i.e., metals, chloride/chlorine, and ash) in each feedstream and the flow rate of the feedstream. To monitor the feed rate of these substances, the flow rate of each feedstream must be monitored under the continuous monitoring requirements of paragraphs (c)(4)(iv) (A) through (C) of this section.

(v) "Certification of compliance statement." The following statement shall accompany the certification of compliance:

"I certify under penalty of law that this information was prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information and supporting documentation. Copies of all emissions tests, dispersion modeling results and other information used to determine conformance with the requirements of Section 266.103(c) are available at the facility and can be obtained from the facility contact person listed above. Based on my inquiry of the person or persons who manages the facility, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I also acknowledge that the operating conditions established in this certification pursuant to Section 266.103(c)(4)(iv) are enforceable limits at which the facility can legally operate during interim status until a revised certification of compliance is submitted."

(5) "Special requirements for HC monitoring systems." When an owner or operator is required to comply with the hydrocarbon (HC) controls provided by Sections 266.104(c) or paragraph (a)(5)(i)(D) of this section, a conditioned gas monitoring system may be used in conformance with specifications provided in Appendix IX of this part provided that the owner or operator submits a certification of compliance without using extensions of time provided by paragraph (c)(7) of this section. However, owners and operators of facilities electing to comply with the alternative hydrocarbon provision of Section 266.104(f) and requesting a time extension under Section 266.103(c)(7)(ii)(B) may establish the baseline HC level and comply with the interim HC limit established by the time extension using a conditioned gas monitoring

system if the Director determines that the owner or operator has demonstrated that they have made a good faith effort to operate a heated monitoring system by found it to be impracticable.

(6) "Special operating requirements for industrial furnaces that recycle collected PM." Owners and operators of industrial furnaces that recycle back into the furnace particulate matter (PM) from the air pollution control system must:

(i) When complying with the requirements of paragraph (c)(3)(ii)(A) of this section, comply with the operating requirements prescribed in "Alternative Method to Implement the Metals Controls" in Appendix IX of this part; and

(ii) When complying with the requirements of paragraph (c)(3)(ii)(B) of this section, comply with the operating requirements prescribed by that paragraph.

(7) "Extensions of time."

(i) If the owner or operator does not submit a complete certification of compliance for all of the applicable emissions standards of Sections 266.104, 266.105, 266.106, and 266.107 by August 21, 1992, he/she must either:

(A) Stop burning hazardous waste and begin closure activities under paragraph (1) of this section for the hazardous waste portion of the facility; or

(B) Limit hazardous waste burning only for purposes of compliance testing (and pretesting to prepare for compliance testing) a total period of 720 hours for the period of time beginning August 21, 1992, submit a notification to the Director by August 21, 1992 stating that the facility is operating under restricted interim status and intends to resume burning hazardous waste, and submit a complete certification of compliance by August 23, 1993; or

(C) Obtain a case-by-case extension of time under paragraph (c)(7)(ii) of this section.

(ii) The owner or operator may request a case-by-case extension of time to extend any time limit provided by paragraph (c) of this section if compliance with the time limit is not practicable for reasons beyond the control of the owner or operator.

(A) In granting an extension, the Director may apply conditions as the facts warrant to ensure timely compliance with the requirements of this section and that the facility operates in a manner that does not pose a hazard to human health and the environment;

(B) When an owner or operator requests an extension of time to enable the facility to comply with the alternative hydrocarbon provisions of Section 266.104(f) and obtain a RCRA operating permit because the facility cannot meet the HC limit of Section 266.104(c) of this chapter:

(1) The Director shall, in considering whether to grant the extension:

(i) Determine whether the owner and operator have submitted in a timely manner a complete Part B permit application that includes information required under Section 270.22(b) of this chapter; and

(ii) Consider whether the owner and operator have made a good faith effort to certify compliance with all other emission controls, including the controls on dioxins and furans of Section 266.104(e) and the controls on PM, metals, and HCl/Cl_2.

(2) If an extension is granted, the Director shall, as a condition of the extension, require the facility to operate under flue gas concentration limits on CO and HC that, based on available information, including information in the part B permit application, are baseline CO and HC levels as defined by Section 266.104(f)(1).

(8) "Revised certification of compliance." The owner or operator may submit at any time a revised certification of compliance (recertification of compliance) under the following procedures:

(i) Prior to submittal of a revised certification of compliance, hazardous waste may not be burned for more than a total of 720 hours under operating conditions that exceed those established under a current certification of compliance, and such burning may be conducted only for purposes of determining whether the facility can operate under revised conditions and continue to meet the applicable emissions standards of Sections 266.104, 266.105, 266.106, and 266.107;

(ii) At least 30 days prior to first burning hazardous waste under operating conditions that exceed those established under a current certification of compliance, the owner or operator shall notify the Director and submit the following information:

(A) EPA facility ID number, and facility name, contact person, telephone number, and address;

(B) Operating conditions that the owner or operator is seeking to revise and description of the changes in facility design or operation that prompted the need to seek to revise the operating conditions;

(C) A determination that when operating under the revised operating conditions, the applicable emissions standards of Sections 266.104, 266.105, 266.106, and 266.107 are not likely to be exceeded. To document this determination, the owner or operator shall submit the applicable information required under paragraph (b)(2) of this section; and

(D) Complete emissions testing protocol for any pretesting and for a new compliance test to determine compliance with the applicable emissions standards of Sections 266.104, 266.105, 266.106, and 266.107 when operating under revised operating conditions. The protocol shall include a schedule of pre-testing and compliance testing. If the owner and operator revises the scheduled date for the compliance test, he/she shall notify the Director in writing at least 30 days prior to the revised date of the compliance test;

(iii) Conduct a compliance test under the revised operating conditions and the protocol submitted to the Director to determine compliance with the applicable emissions standards of Sections 266.104, 266.105, 266.106, and 266.107; and

(iv) Submit a revised certification of compliance under paragraph (c)(4) of this section.

(d) "Periodic Recertifications." The owner or operator must conduct compliance testing and submit to the Director a recertification of compliance under provisions of paragraph (c) of this section within three years from submitting the previous certification or recertification. If the owner or operator seeks to recertify compliance under new operating conditions, he/she must comply with the requirements of paragraph (c)(8) of this section.

(e) "Noncompliance with certification schedule." If the owner or operator does not comply with the interim status compliance schedule provided by paragraphs (b),(c), and (d) of this section, hazardous waste burning must terminate on the date that the deadline is missed, closure activities must begin under paragraph (i) of this section, and hazardous waste burning may not resume except under an operating permit issued under Section 270.66 of this chapter. For purposes of compliance with the closure provisions of paragraph (i) of this section and Sections 265.112(d)(2) and 265.113 of this chapter the boiler or industrial furnace has received "the known final volume of hazardous waste" on the date that the deadline is missed.

(f) "Start-up and shut-down." Hazardous waste (except waste fed solely as an ingredient under the Tier I (or adjusted Tier I) feed rate screening limits for metals and chloride/chlorine) must not be fed into the device during start-up and shut-down of the boiler or industrial furnace, unless the device is operating within the conditions of operation specified in the certification of compliance.

(g) "Automatic waste feed cutoff." During the compliance test required by paragraph (c)(3) of this section, and upon certification of compliance under paragraph (c) of this section, a boiler or industrial furnace must be operated with a functioning system that automatically cuts off the hazardous waste feed when the applicable operating conditions specified in paragraphs (c)(1)(i) and (v through xiii) of this section deviate from those established in the certification of compliance. In addition:

(1) To minimize emissions of organic compounds, the minimum combustion chamber temperature (or the indicator of combustion chamber temperature) that occurred during the compliance test must be maintained while hazardous waste or hazardous waste residues remain in the combustion chamber, with the minimum temperature during the compliance test defined as either:

(i) If compliance with the combustion chamber temperature limit is based on a hourly rolling average, the minimum temperature during the compliance test is considered to be the average over all runs of the lowest hourly rolling average for each run; or

(ii) If compliance with the combustion chamber temperature limit is based on an instantaneous temperature measurement, the minimum temperature during the compliance test is considered to be the time-weighted average temperature during all runs of the test; and

(2) Operating parameters limited by the certification of compliance must continue to be monitored during the cutoff, and the hazardous waste feed shall not be restarted until the levels of those parameters comply with the limits established in the certification of compliance.

(h) "Fugitive emissions." Fugitive emissions must be controlled by:

(1) Keeping the combustion zone totally sealed against fugitive emissions; or

(2) Maintaining the combustion zone pressure lower than atmospheric pressure; or

(3) An alternate means of control that the owner or operator can demonstrate provide fugitive emissions control equivalent to maintenance of combustion zone pressure lower than atmospheric pressure. Support for such demonstration shall be included in the operating record.

(i) "Changes." A boiler or industrial furnace must cease burning hazardous waste when changes in combustion properties, or feed rates of the hazardous waste, other fuels, or industrial furnace feedstocks, or changes in the boiler or industrial furnace design or operating conditions deviate from the limits specified in the certification of compliance.

(j) "Monitoring and Inspections."

(1) The owner or operator must monitor and record the following, at a minimum, while burning hazardous waste:

(i) Feed rates and composition of hazardous waste, other fuels, and industrial furnace feed stocks, and feed rates of ash, metals, and total chloride and chlorine as necessary to ensure conformance with the certification of precompliance or certification of compliance;

(ii) Carbon monoxide (CO), oxygen, and if applicable, hydrocarbons (HC), 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 the operating limits specified in the certification of compliance. CO, HC, and oxygen monitors must be installed, operated, and maintained in accordance with methods specified in Appendix IX of this part.

(iii) Upon the request of the Director, sampling and analysis of the hazardous waste (and other fuels and industrial furnace feed stocks as appropriate) and the stack gas emissions must be conducted to verify that the operating conditions established in the certification of precompliance or certification of compliance achieve the applicable standards of Sections 266.104, 266.105, 266.106, and 266.107.

(2) The boiler or industrial furnace and associated equipment (pumps, valves, pipes, fuel storage tanks, etc.) must be subjected to thorough visual inspection when they contain hazardous waste, at least daily for leaks, spills, fugitive emissions, and signs of tampering.

(3) The automatic hazardous waste feed cutoff system and associated alarms must be tested at least once every 7 days when hazardous waste is burned to verify operability, unless the owner or operator can demonstrate that weekly inspections will unduly restrict or upset operations and that less frequent inspections will be adequate. Support for such demonstration shall be included in the operating record. At a minimum, operational testing must be conducted at least once every 30 days.

(4) These monitoring and inspection data must be recorded and the records must be placed in the operating log.

(k) "Recordkeeping." The owner or operator must keep in the operating record of the facility all information and data required by this section until closure of the boiler or industrial furnace unit.

(l) "Closure." At closure, the owner or operator must remove all hazardous waste and hazardous waste residues (including, but not limited to, ash, scrubber waters, and scrubber sludges) from the boiler or industrial furnace and must comply with Sections 265.111-265.115 of this chapter.

266.104 Standards to Control Organic Emissions.

(a) "DRE standard--"

(1) "General." Except as provided in paragraph (a)(3) of this section, a boiler or industrial furnace burning hazardous waste must achieve a destruction and removal efficiency (DRE) of 99.99% for all organic hazardous constituents in the waste feed. To demonstrate conformance with this requirement, 99.99% DRE must be demonstrated during a trial burn for each principal organic hazardous constituent (POHC) designated (under paragraph (a)(2) of this section) in its permit for each waste feed. DRE is determined for each POHC from the following equation:

$$DRE = \left[1 - \frac{W_{out}}{W_{in}} \right] \times 100$$

where:

W_{in} = Mass feed rate of one principal organic hazardous constituent (POHC) in the hazardous waste fired to the boiler or industrial furnace; and

W_{out} = Mass emission rate of the same POHC present in stack gas prior to release to the atmosphere.

(2) "Designation of POHCs." Principal organic hazardous constituents (POHCs) are those compounds for which compliance with the DRE requirements of this section shall be demonstrated in a trial burn in conformance with procedures prescribed in Section 270.66 of this chapter. One or more POHCs shall be designated by the Director for each waste feed to be burned. POHCs shall be designated based on the degree of difficulty of destruction of the organic constituents in the waste and on their concentrations or mass in the waste feed considering the results of waste analyses submitted with part B of the permit application. POHCs are most likely to be selected from among those compounds listed in part 261, Appendix VIII of this chapter that are also present in the normal waste feed. However, if the applicant demonstrates to the Regional Administrator's satisfaction that a compound not listed in Appendix VIII or not present in the normal waste feed is a suitable indicator of compliance with the DRE requirements of this section, that compound may be designated as a POHC. Such POHCs need not be toxic or organic compounds.

(3) "Dioxin-listed waste." A boiler or industrial furnace burning hazardous waste containing (or derived from) EPA Hazardous Wastes Nos. F020, F021, F022, F023, F026, or F027 must achieve a destruction and removal efficiency (DRE) of 99.9999% for each POHC designated (under paragraph (a)(2) of this section) in its permit. This performance must be demonstrated on POHCs that are more difficult to burn than tetra-, penta-, and hexachlorodibenzo-*p*-dioxins and dibenzofurans. DRE is determined for each POHC from the equation in paragraph (a) of this section. In addition, the owner or operator of the boiler or industrial furnace must notify the Director of intent to burn EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, or F027.

(4) "Automatic waiver of DRE trial burn." Owners and operators of boilers operated under the special operating requirements provided by Section 266.110 are considered to be in compliance with the DRE standard of paragraph (a)(1) of this section and are exempt from the DRE trial burn.

(5) "Low risk waste." Owners and operators of boilers or industrial furnaces that burn hazardous waste in compliance with the requirements of Section 266.109(a) are considered to be in compliance with the DRE standard of paragraph (a)(1) of this section and are exempt from the DRE trial burn.

(b) "Carbon monoxide standard."

(1) Except as provided in paragraph (c) of this section, the stack gas concentration of carbon monoxide (CO) from a boiler or industrial furnace burning hazardous waste cannot exceed 100 ppmv on an hourly rolling average basis (i.e., over any 60 minute period), continuously corrected to 7 percent oxygen, dry gas basis.

(2) CO and oxygen shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Carbon Monoxide and Oxygen for Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste" in Appendix IX of this part.

(3) Compliance with the 100 ppmv CO limit must be demonstrated during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). To demonstrate compliance, the highest hourly rolling average CO level during any valid run of the trial burn or compliance test must not exceed 100 ppmv.

(c) "Alternative carbon monoxide standard."

(1) The stack gas concentration of carbon monoxide (CO) from a boiler or industrial furnace burning hazardous waste may exceed the 100 ppmv limit provided that stack gas concentrations of hydrocarbons (HC) do not exceed 20 ppmv, except as provided by paragraph (f) of this section for certain industrial furnaces.

(2) HC limits must be established under this section on an hourly rolling average basis (i.e., over any 60 minute period), reported as propane, and continuously corrected to 7 percent oxygen, dry gas basis.

(3) HC shall be continuously monitored in conformance with "Performance Specifications for Continuous Emission Monitoring of Hydrocarbons for Incinerators, Boilers, and Industrial Furnaces Burning Hazardous Waste" in Appendix IX of this part. CO and oxygen shall be continuously monitored in conformance with paragraph (b)(2) of this section.

(4) The alternative CO standard is established based on CO data during the trial burn (for a new facility) and the compliance test (for an interim status facility). The alternative CO standard is the average over all valid runs of the highest hourly average CO level for each run. The CO limit is implemented on an hourly rolling average basis, and continuously corrected to 7 percent oxygen, dry gas basis.

(d) "Special requirements for furnaces."

Owners and operators of industrial furnaces (e.g., kilns, cupolas) that feed hazardous waste for a purpose other than solely as an ingredient (see Section 266.103(a)(5)(ii)) at any location other than the end where products are normally discharged and where fuels are normally fired must comply with the hydrocarbon limits provided by paragraphs (c) or (f) of this section irrespective of whether stack gas CO concentrations meet the 100 ppmv limit of paragraph (b) of this section.

(e) "Controls for dioxins and furans." Owners and operators of boilers and industrial furnaces that are equipped with a dry particulate matter control device that operates within the temperature range of 450-750 Degrees F., and industrial furnaces operating under an alternative hydrocarbon limit established under paragraph (f) of this section must conduct a site-specific risk assessment as follows to demonstrate that emissions of chlorinated dibenzo-p-dioxins and dibenzofurans do not result in an increased lifetime cancer risk to the hypothetical maximum exposed individual (MEI) exceeding 1 in 100,000:

(1) During the trial burn (for new facilities or an interim status facility applying for a permit) or compliance test (for interim status facilities), determine emission rates of the tetra-octa congeners of chlorinated Dibenzo-p-Dioxins (PCDDs) and dibenzofurans (CDDs/CDFs) using Method 23, "Determination of Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans (PCDFs) from Stationary Sources", in Appendix IX of this part;

(2) Estimate the 2,3,7,8-TCDD toxicity equivalence of the tetra-octa CDDs/CDFs congeners using "Procedures for Estimating the Toxicity Equivalence of Chlorinated Dibenzo-p-Dioxin and Dibenzofuran Congeners" in Appendix IX of this part. Multiply the emission rates of CDD/CDF congeners with a toxicity equivalence greater than zero (see the procedure) by the calculated toxicity equivalence factor to estimate the equivalent emission rate of 2,3,7,8-TCDD;

(3) Conduct dispersion modeling using methods recommended in Guideline on Air Quality Models (Revised) or the "Hazardous Waste Combustion Air Quality Screening Procedure", which are provided in Appendices X and IX, respectively, of this part, or "EPA SCREEN Screening Procedure" as described in Screening Procedures for Estimating Air Quality Impact of Stationary Sources (incorporated by reference in Section 260.11) to predict the maximum annual average off-site ground level concentration of 2,3,7,8-TCDD equivalents determined under paragraph (e)(2) of this section. The maximum annual average on-site concentration must be used when a person resides on-site; and

(4) The ratio of the predicted maximum annual average ground level concentration of 2,3,7,8-TCDD equivalents to the risk-specific dose for 2,3,7,8-TCDD provided in Appendix V of this part a (2.2×10^{-7}) shall not exceed 1.0.

(f) "Monitoring CO and HC in the bypass duct of a cement kiln." 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:

(1) Hazardous waste is fired only into the kiln and not at any location downstream from the kiln exit relative to the direction of gas flow; and

(2) The by-pass duct diverts a minimum of 10% of kiln off-gas into the duct.

(g) "Use of emissions test data to demonstrate compliance and establish operating limits." Compliance with the requirements of this section must be demonstrated simultaneously by emissions testing or during separate runs under identical operating conditions. Further, data to demonstrate compliance with the CO and HC limits of this section or to establish alternative CO or HC limits under this section must be obtained during the time that DRE testing, and where applicable, CDD/CDF testing under paragraph (e) of this section and comprehensive organic emissions testing under paragraph (f) is conducted.

(h) "Enforcement." For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under Section 266.102) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and re-issuance of a permit under Section 270.41 of this chapter.

266.105 Standards to Control Particulate Matter

(a) A boiler or industrial furnace burning hazardous waste may not emit particulate matter in excess of 180 milligrams per dry standard cubic meter (0.08 grains per dry standard cubic foot) after correction to a stack gas concentration of 7% oxygen, using procedures prescribed in 40 CFR part 60, Appendix A, methods 1 through 5, and Appendix IX of this part.

(b) An owner or operator meeting the requirements of Section 266.109(b) for the low risk waste exemption is exempt from the particulate matter standard.

(c) For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under Section 266.102) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and re-issuance of a permit under Section 270.41 of this chapter.

266.106 Standards to Control Metals Emissions.

(a) "General." The owner or operator must comply with the metals standards provided by paragraphs (b), (c), (d), (e), or (f) of this section for each metal listed in paragraph (b) of this section that is present in the hazardous waste at detectable levels using analytical procedures specified in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846), incorporated by reference in Section 260.11 of this chapter.

(b) "Tier I feed rate screening limits." Feed rate screening limits for metals are specified in Appendix I of this part as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in paragraph (b)(7) of this section.

(1) "Noncarcinogenic metals." The feed rates of antimony, barium, lead, mercury, thallium, and silver in all feed streams, including hazardous waste, fuels, and industrial furnace feed stocks shall not exceed the screening limits specified in Appendix I of this part.

(i) The feed rate screening limits for antimony, barium, mercury, thallium, and silver are based on either:

(A) An hourly rolling average as defined in Section 266.102(e)(6)(i)(B); or

(B) An instantaneous limit not to be exceeded at any time.

(ii) The feed rate screening limit for lead is based on one of the following:

(A) An hourly rolling average as defined in Section 266.102(e)(6)(i)(B);

(B) An averaging period of 2 to 24 hours as defined in Section 266.102(e)(6)(ii) with an instantaneous feed rate limit not to exceed 10 times the feed rate that would be allowed on an hourly rolling average basis; or

(C) An instantaneous limit not to be exceeded at any time.

(2) "Carcinogenic metals."

(i) The feed rates of arsenic, cadmium, beryllium, and chromium in all feed streams, including hazardous waste, fuels, and industrial furnace feed stocks shall not exceed values derived from the screening limits specified in Appendix I of this part.

The feed rate of each of these metals is limited to a level such that the sum of the ratios of the actual feed rate to the feed rate screening limit specified in Appendix I shall not exceed 1.0 as provided by the following equation:

$$\sum_{i=1}^{n} \frac{AFR_{(i)}}{FRSL(i)} \leq 1.0$$

where:

n = number of carcinogenic metals
AFR = actual feed rate to the device for metal "i"
FRSL = feed rate screening limit provided by Appendix I of this part for metal "i".

(ii) The feed rate screening limits for the carcinogenic metals are based on either:

(A) An hourly rolling average; or

(B) An averaging period of 2 to 24 hours as defined in Section 266.102(e)(6)(ii) with an instantaneous feed rate limit not to exceed 10 times the feed rate that would be allowed on an hourly rolling average basis.

(3) "TESH." (i) The terrain-adjusted effective stack height is determined according to the following equation:

TESH=Ha+Hl-Tr

where:

Ha=Actual physical stack height
Hl=Plume rise as determined from Appendix VI of this part as a function of stack flow rate and stack gas exhaust temperature.
Tr=Terrain rise within five kilometers of the stack.

(ii) The stack height (Ha) may not exceed good engineering practice as specified in 40 CFR 51.100(ii).

(iii) If the TESH for a particular facility is not listed in the table in the appendices, the nearest lower TESH listed in the table shall be used. If the TESH is four meters or less, a value of four meters shall be used.

(4) "Terrain type." The screening limits are a function of whether the facility is located in noncomplex or complex terrain. A device located where any part of the surrounding terrain within 5 kilometers of the stack equals or exceeds the elevation of the physical stack height (Ha) is considered to be in complex terrain and the screening limits for complex terrain apply. Terrain measurements are to be made from U.S. Geological Survey 7.5-minute topographic maps of the area surrounding the facility.

(5) "Land use." The screening limits are a function of whether the facility is located in an area where the land use is urban or rural. To determine whether land use in the vicinity of the facility is urban or rural, procedures provided in Appendices IX or X of this part shall be used.

(6) "Multiple stacks." Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls of metals emissions under a RCRA operating permit or interim status controls must comply with the screening limits for all such units assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics. The worst-case stack is determined from the following equation as applied to each stack:

$K = HVT$

Where:

K = a parameter accounting for relative influence of stack height and plume rise;

H = physical stack height (meters);

V = stack gas flow rate (m^3/second); and

T = exhaust temperature (°K).

The stack with the lowest value of K is the worst-case stack.

(7) "Criteria for Facilities not Eligible for Screening Limits." If any criteria below are met, the Tier I (and Tier II) screening limits do not apply. Owners and operators of such facilities must comply with either the Tier III standards provided by paragraph (d) of this section or with the adjusted Tier I feed rate screening limits provided by paragraph (e) of this section.

(i) The device is located in a narrow valley less than one kilometer wide;

(ii) The device has a stack taller than 20 meters and is located such that the terrain rises to the physical height within one kilometer of the facility;

(iii) The device has a stack taller than 20 meters and is located within five kilometers of a shoreline of a large body of water such as an ocean or large lake;

(iv) The physical stack height of any stack is less than 2.5 times the height of any building within five building heights or five projected building widths of the stack and the distance from the stack to the closest boundary is within five building heights or five projected building widths of the associated building; or

(v) The Director determines that standards based on site-specific dispersion modeling are required.

(8) "Implementation." The feed rate of metals in each feedstream must be monitored to ensure that the feed rate screening limits are not exceeded.

(c) "Tier II Emission Rate Screening Limits." Emission rate screening limits are specified in Appendix I as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. Criteria for facilities that are not eligible to comply with the screening limits are provided in paragraph (b)(7) of this section.

(1) "Noncarcinogenic Metals." The emission rates of antimony, barium, lead, mercury, thallium, and silver shall not exceed the screening limits specified in Appendix I of this part.

(2) "Carcinogenic Metals." The emission rates of arsenic, cadmium, beryllium, and chromium shall not exceed values derived from the screening limits specified in Appendix I of this part. The emission rate of each of these metals is limited to a level such that the sum of the ratios of the actual emission rate to the emission rate screening limit specified in Appendix I shall not exceed 1.0, as provided by the following equation:

$$\sum_{i=1}^{n} \frac{AER_{(i)}}{ERSL_{(i)}} \leq 1.0$$

where:
n = number of carcinogenic metals
AER = actual emission rate for metal "i"
ERSL = emission rate screening limit provided by Appendix I of this part for metal "i".

(3) "Implementation." The emission rate limits must be implemented by limiting feed rates of the individual metals to levels during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). The feed rate averaging periods are the same as provided by paragraphs (b)(1)(i) and (ii) and (b)(2)(ii) of this section. The feed rate of metals in each feedstream must be monitored to ensure that the feed rate limits for the feedstreams specified under Sections 266.102 or 266.103 are not exceeded.

(4) "Definitions and Limitations." The definitions and limitations provided by paragraph (b) of this section for the following terms also apply to the Tier II emission rate screening limits provided by paragraph (c) of this section: terrain-adjusted effective stack height, good engineering practice stack height, terrain type, land use, and criteria for facilities not eligible to use the screening limits.

(5) "Multiple Stacks."

(i) Owners and operators of facilities with more than one onsite stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on metals emissions under a RCRA operating permit or interim status controls must comply with the emissions screening limits for any such stacks assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics.

(ii) The worst-case stack is determined by procedures provided in paragraph (b)(6) of this section.

(iii) For each metal, the total emissions of the metal from those stacks shall not exceed the screening limit for the worst-case stack.

(d) "Tier III And Adjusted Tier I Site-specific Risk Assessment--" The requirements of this paragraph apply to facilities complying with either the Tier III or Adjusted Tier I controls, except where specified otherwise.

(1) "General." Conformance with the Tier III metals controls must be demonstrated by emissions testing to determine the emission rate for each metal. In addition, conformance with either the Tier III or Adjusted Tier I metals controls must be demonstrated by air dispersion modeling to predict the maximum annual average off-site ground level concentration for each dispersion modeling to predict the annual average off-site ground level concentration for each metal, and a demonstration that acceptable ambient levels are not exceeded.

(2) "Acceptable Ambient Levels." Appendices IV and V of this part list the acceptable ambient levels for purposes of this rule. Reference air concentrations (RACs) are listed for the noncarcinogenic metals and 10^{-5} risk-specific doses (RSDs) are listed for the carcinogenic metals. The RSD for a metal is the acceptable ambient level for that metal provided that only one of the four carcinogenic metals is emitted. If more than one carcinogenic metal is emitted, the acceptable ambient level for the carcinogenic metals is a fraction of the RSD as described in paragraph (d)(3) of this section.

(3) "Carcinogenic metals." For the carcinogenic metals, arsenic, cadmium, beryllium, and chromium, the sum of the ratios of the predicted maximum annual average off-site ground level concentrations (except that on-site concentrations must be considered if a person resides on site) to the risk-specific dose (RSD) for all carcinogenic metals emitted shall not exceed 1.0 as determined by the following equation:

$$\sum_{i=1}^{n} \frac{\text{Predicted Ambient Concentration}_{(i)}}{\text{Risk-Specific Dose(i)}} \leq 1.0$$

where: n = number of carcinogenic metals

(4) "Noncarcinogenic Metals." For the noncarcinogenic metals, the predicted maximum annual average off-site ground level concentration for each metal shall not exceed the reference air concentration (RAC).

(5) "Multiple Stacks." Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on metals emissions under a RCRA operating permit or interim status controls must conduct emissions testing (except that facilities complying with Adjusted Tier I controls need not 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) "Implementation." Under Tier III, the metals controls must be implemented by limiting feed rates of the individual metals to levels during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). The feed rate averaging periods are the same as provided by paragraphs (b)(1)(i) and (ii) and (b)(2)(ii) of this section. The feed rate of metals in each feedstream must be monitored to ensure that the feed rate limits for the feedstreams specified under Section 266.102 or 266.103 are not exceeded.

(e) "Adjusted Tier I Feed Rate Screening Limits." The owner or operator may adjust the feed rate screening limits provided by Appendix I of this part to account for site-specific dispersion modeling. Under this approach, the adjusted feed rate screening limit for a metal is determined by back-calculating from the acceptable ambient level provided by Appendices IV and V of this part using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the adjusted Tier I feed rate screening limit. The feed rate screening limits for carcinogenic metals are implemented as prescribed in paragraph (b)(2) of this section.

(f) "Alternative Implementation Approaches."

(1) The Director may approve on a case-by-case basis approaches to implement the Tier II or Tier III metals emission limits provided by paragraphs (c) or (d) of this section alternative to monitoring the feed rate of metals in each feedstream.

(2) The emission limits provided by paragraph (d) of this section must be determined as follows:

(i) For each noncarcinogenic metal, by back-calculating from the RAC provided in Appendix IV of this part to determine the allowable emission rate for each metal using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with Paragraph (h) of this section; and

(ii) For each carcinogenic metal by:

(A) Back-calculating from the RSD provided in Appendix V of this part to determine the allowable emission rate for each metal if that metal were the only carcinogenic metal emitted using the dilution factor for the maximum annual average ground level concentration predicted by dispersion modeling in conformance with Paragraph (h) of this section; and

(B) If more than one carcinogenic metal is emitted, selecting an emission limit for each carcinogenic metal not to exceed the emission rate determined by Paragraph (f)(2)(ii)(A) of this section such that the sum for all carcinogenic metals of the ratios of the selected emission limit to the emission rate determined by that paragraph does not exceed 1.0.

(g) "Emissions Testing--"

(1) "General." Emissions testing for metals shall be conducted using the Multiple Metals Train as described in Appendix IX of this part.

(2) "Hexavalent Chromium." Emissions of chromium are assumed to be hexavalent chromium unless the owner or operator conducts emissions testing to determine hexavalent chromium emissions using procedures prescribed in Appendix IX of this part.

(h) "Dispersion Modeling." Dispersion modeling required under this section shall be conducted according to methods recommended in Appendix X of this part, the "Hazardous Waste Combustion Air Quality Screening Procedure" described in Appendix IX of this part, or "EPA SCREEN Screening Procedure" as described in Screening Procedures for Estimating Air Quality Impact of Stationary Sources (the latter document is incorporated by reference, see Section 260.11) to predict the maximum annual average off-site ground level concentration. However, on-site concentrations must be considered when a person resides on-site.

(i) "Enforcement." For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under Section 266.102) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and re-issuance of a permit under Section 270.41 of this chapter.

266.107 Standards to Control Hydrogen Chloride (HCl) and Chlorine Gas (Cl_2) Emissions.

(a) "General." The owner or operator must comply with the hydrogen chloride (HCl) and chlorine (Cl_2) controls provided by paragraph (b), (c), or (e) of this section.

(b) "Screening Limits--"

(1) "Tier I Feed Rate Screening Limits." Feed rate screening limits are specified for total chlorine in Appendix II of this part as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. The feed rate of total chlorine and chloride, both organic and inorganic, in all feed streams, including hazardous waste, fuels, and industrial furnace feed stocks shall not exceed the levels specified.

(2) "Tier II Emission Rate Screening Limits." Emission rate screening limits for HCl and Cl_2 are specified in Appendix III of this part as a function of terrain-adjusted effective stack height and terrain and land use in the vicinity of the facility. The stack emission rates of HCl and Cl_2 shall not exceed the levels specified.

(3) "Definitions and Limitations." The definitions and limitations provided by Section 266.106(b) for the following terms also apply to the screening limits provided by this paragraph: Terrain-adjusted effective stack height, good engineering practice stack height, terrain type, land use, and criteria for facilities not eligible to use the screening limits.

(4) "Multiple Stacks." Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on HCl or Cl_2 emissions under a RCRA operating permit or interim status controls must comply with the Tier I and Tier II screening limits for those stacks assuming all hazardous waste is fed into the device with the worst-case stack based on dispersion characteristics.

(i) The worst-case stack is determined by procedures provided in Section 266.106(b)(6).

(ii) Under Tier I, the total feed rate of chlorine and chloride to all subject devices shall not exceed the screening limit for the worst-case stack.

(iii) Under Tier II, the total emissions of HCl and CL_2 from all subject stacks shall not exceed the screening limit for the worst-case stack.

(c) "Tier III Site-specific Risk Assessments--"

(1) "General." Conformance with the Tier III controls must be demonstrated by emissions testing to determine the emission rate for HCl and Cl_2, 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.

(2) "Acceptable Ambient Levels." Appendix IV of this part lists the reference air concentrations (RACs) for HCl (7 micrograms per cubic meter) and Cl_2 (0.4 micrograms per cubic meter).

(3) "Multiple Stacks." Owners and operators of facilities with more than one on-site stack from a boiler, industrial furnace, incinerator, or other thermal treatment unit subject to controls on HCl or Cl_2 emissions under a RCRA operating permit or interim status controls 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 CL_2.

(d) "Averaging Periods." The HCl and Cl_2 controls are implemented by limiting the feed rate of total chlorine and chloride in all feedstreams, including hazardous waste, fuels, and industrial furnace feed stocks. Under Tier I, the feed rate of total chloride and chlorine is limited to the Tier I Screening Limits. Under Tier II and Tier III, the feed rate of total chloride and chlorine is limited to the feed rates during the trial burn (for new facilities or an interim status facility applying for a permit) or the compliance test (for interim status facilities). The feed rate limits are based on either:

(1) An hourly rolling average as defined in Section 266.102(e)(6); or

(2) An instantaneous basis not to be exceeded at any time.

(e) "Adjusted Tier I feed rate screening limits." The owner or operator may adjust the feed rate screening limit provided by Appendix II of this part to account for site-specific dispersion modeling. Under this approach, the adjusted feed rate screening limit is determined by back-calculating from the acceptable ambient level for Cl_2 provided by Appendix IV of this part using dispersion modeling to determine the maximum allowable emission rate. This emission rate becomes the adjusted Tier I feed rate screening limit.

(f) "Emissions testing." Emissions testing for HCl and Cl_2 shall be conducted using the procedures described in Appendix IX of this part.

(g) "Dispersion modeling." Dispersion modeling shall be conducted according to the provisions of Section 266.106(h).

(h) "Enforcement." For the purposes of permit enforcement, compliance with the operating requirements specified in the permit (under Section 266.102) will be regarded as compliance with this section. However, evidence that compliance with those permit conditions is insufficient to ensure compliance with the requirements of this section may be "information" justifying modification or revocation and re-issuance of a permit under Section 270.41 of this chapter.

266.108 Small quantity on-site burner exemption.

(a) "Exempt quantities." Owners and operators of facilities that burn hazardous waste in an on-site boiler or industrial furnace are exempt from the requirements of this subpart provided that:

(1) The quantity of hazardous waste burned in a device for a calendar month does not exceed the limits provided in the following table based on the terrain-adjusted effective stack height as defined in Section 266.106(b)(3):

EXEMPT QUANTITIES FOR SMALL QUANTITY BURNER EXEMPTION

Terrain-adjusted effective stack height of device (meters)	Allowable hazardous waste burning rate (gallons/month)	Terrain-adjusted effective stack height of device (meters)	Allowable hazardous waste burning rate (gallons/month)
0 to 3.9.....	0	40.0 to 44.9.....	210
4.0 to 5.9.....	13	45.0 to 49.9.....	260
6.0 to 7.9.....	18	50.0 to 54.9.....	330
8.0 to 9.9.....	27	55.0 to 59.9.....	400
10.0 to 11.9.....	40	60.0 to 64.9.....	490
12.0 to 13.9.....	48	65.0 to 69.9.....	610
14.0 to 15.9.....	59	70.0 to 74.9.....	680
16.0 to 17.9.....	69	75.0 to 79.9.....	760
18.0 to 19.9.....	76	80.0 to 84.9.....	960
22.0 to 23.9.....	93	90.0 to 94.9.....	1,100
24.0 to 25.9.....	100	95.0 to 99.9.....	1,200
26.0 to 27.9.....	110	100.0 to 104.9..	1,300
28.0 to 29.9.....	130	105.0 to 109.9..	1,500
30.0 to 34.9.....	140	110.0 to 114.9..	1,700
35.0 to 39.9.....	170	115.0 or greater	1,900

(2) The maximum hazardous waste firing rate does not exceed at any time 1 percent of the total fuel requirements for the device (hazardous waste plus other fuel) 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) EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, or F027.

(b) "Mixing with nonhazardous fuels." If hazardous waste fuel is mixed with a nonhazardous fuel, the quantity of hazardous waste before such mixing is used to comply with paragraph (a).

(c) "Multiple stacks." If an owner or operator burns hazardous waste in more than one on-site boiler or industrial furnace exempt under this section, the quantity limits provided by paragraph (a)(1) of this section are implemented according to the following equation:

$$\sum_{i=1}^{n} \frac{\text{Actual Quantity Burned (i)}}{\text{Allowable Quantity Burned (i)}} \leq 1.0$$

where:

n means the number of stacks;
Actual Quantity Burned means the waste quantity burned per month in device "i";
Allowable Quantity Burned means the maximum allowable exempt quantity for stack "i" from the table in (a)(1) above.

Note: Hazardous wastes that are subject to the special requirements for small quantity generators under Section 261.5 of this chapter may be burned in an off-site device under the exemption provided by Section 266.108, but must be included in the quantity determination for the exemption.

(d) "Notification requirements." The owner or operator of facilities qualifying for the small quantity burner exemption under this section must provide a one-time signed, written notice to EPA indicating the following:
(1) The combustion unit is operating as a small quantity burner of hazardous waste;
(2) The owner and operator are in compliance with the requirements of this section; and
(3) The maximum quantity of hazardous waste that the facility may burn per month as provided by Section 266.108(a)(1).

(e) "Recordkeeping requirements." The owner or operator must maintain at the facility for at least three years sufficient records documenting compliance with the hazardous waste quantity, firing rate, and heating value limits of this section. At a minimum, these records must indicate the quantity of hazardous waste and other fuel burned in each unit per calendar month, and the heating value of the hazardous waste.

266.109 Low risk waste exemption.

(a) "Waiver of DRE standard." The DRE standard of Section 266.104(a) does not apply if the boiler or industrial furnace is operated in conformance with (a)(1) of this section and the owner or operator demonstrates by procedures prescribed in (a)(2) of this section that the burning will not result in unacceptable adverse health effects.
(1) The device shall be operated as follows:
(i) A minimum of 50 percent of fuel fired to the device shall be fossil fuel, fuels derived from fossil fuel, tall oil, or, if approved by the Director on a case-by-case basis, other nonhazardous fuel with combustion characteristics comparable to fossil fuel. Such fuels are termed "primary fuel" for purposes of this section. (Tall oil is a fuel derived from vegetable and rosin fatty acids.) The 50 percent 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) Primary fuels and hazardous waste fuels shall have a minimum as-fired heating value of 8,000 Btu/lb;
(iii) The hazardous waste is fired directly into the primary fuel flame zone of the combustion chamber; and

(iv) The device operates in conformance with the carbon monoxide controls provided by Section 266.104(b)(1). Devices subject to the exemption provided by this section are not eligible for the alternative carbon monoxide controls provided by Section 266.104(c).

(2) Procedures to demonstrate that the hazardous waste burning will not pose unacceptable adverse public health affects are as follows:

(i) Identify and quantify those nonmetal compounds listed in Appendix VIII, part 261 of this chapter that could reasonably be expected to be present in the hazardous waste. The constituents excluded from analysis must be identified and the basis for their exclusion explained;

(ii) Calculate reasonable, worst case emission rates for each constituent identified in paragraph (a)(2)(i) of this section by assuming the device achieves 99.9 percent destruction and removal efficiency. That is, assume that 0.1 percent of the mass weight of each constituent fed to the device is emitted.

(iii) For each constituent identified in paragraph (a)(2)(i) of this section, use emissions dispersion modeling to predict the maximum annual average ground level concentration of the constituent.

(A) Dispersion modeling shall be conducted using methods specified in Section 266.106(h).

(B) Owners and operators of facilities with more than one on-site stack from a boiler or industrial furnace that is exempt under this section must conduct dispersion modeling of emissions from all stacks exempt under this section to predict ambient levels prescribed by this paragraph.

(iv) Ground level concentrations of constituents predicted under paragraph (a)(2)(iii) of this section must not exceed the following levels:

(A) For the noncarcinogenic compounds listed in Appendix IV of this part, the levels established in Appendix IV;

(B) For the carcinogenic compounds listed in Appendix V of this part, the sum for all constituents of the ratios of the actual ground level concentration to the level established in Appendix V cannot exceed 1.0; and

(C) For constituents not listed in Appendix IV or V, 0.1 micrograms per cubic meter.

(b) "Waiver of particular matter standard." The particulate matter standard of Section 266.105 does not apply if:

(1) The DRE standard is waived under paragraph (a) of this section; and

(2) The owner or operator complies with the Tier I or adjusted Tier I metals feed rate screening limits provided by Section 266.106(b) or (e).

266.110 Waiver of DRE trial burn for boilers.

Boilers that operate under the special requirements of this section, and that do not burn hazardous waste containing (or derived from) EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, or F027, are considered to be in conformance with the DRE standard of Section 266.104(a), and a trial burn to demonstrate DRE is waived. When burning hazardous waste:

(a) A minimum of 50 percent of fuel fired to the device shall be fossil fuel, fuels derived from fossil fuel, tall oil, or, if approved by the Director on a case-by-case basis, other nonhazardous fuel with combustion characteristics comparable to fossil fuel. Such fuels are termed "primary fuel" for purposes of this section. (Tall oil is a fuel derived from vegetable and rosin fatty acids.) The 50 percent 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) Boiler load shall not be less than 40 percent. Boiler load is the ratio at any time of the total heat input to the maximum design heat input;

(c) Primary fuels and hazardous waste fuels shall have a minimum as-fired heating value of 8,000 Btu/lb, and each material fired in a burner where hazardous waste is fired must have a heating value of at least 8,000 Btu/lb, as-fired;

(d) The device shall operate in conformance with the carbon monoxide standard provided by Section 266.104(b)(1). Boilers subject to the waiver of the DRE trial burn provided by this section are not eligible for the alternative carbon monoxide standard provided by Section 266.104(c);

(e) The boiler must be a watertube type boiler that does not feed fuel using a stoker or stoker type mechanism; and

(f) The hazardous waste shall be fired directly into the primary fuel flame zone of the combustion chamber with an air or steam atomization firing system, mechanical atomization system, or a rotary cup atomization system under the following conditions:

(1) "Viscosity." The viscosity of the hazardous waste fueled as-fired shall not exceed 300 SSU;

(2) "Particle size." When a high pressure air or steam atomizer, low pressure atomizer, or mechanical atomizer is used, 70% of the hazardous waste fuel must pass through a 200 mesh (74 micron) screen, and when a rotary cup atomizer is used, 70% of the hazardous waste must pass through a 100 mesh (150 micron) screen;

(3) "Mechanical atomization systems." Fuel pressure within a mechanical atomization system and fuel flow rate shall be maintained within the design range taking into account the viscosity and volatility of the fuel;

(4) "Rotary cup atomization systems." Fuel flow rate through a rotary cup atomization system must be maintained within the design range taking into account the viscosity and volatility of the fuel.

266.111 Standards for direct transfer.

(a) "Applicability." The regulations in this section apply to owners and operators of boilers and industrial furnaces subject to Section 266.102 or 266.103 if hazardous waste is directly transferred from a transport vehicle to a boiler or industrial furnace without the use of a storage unit.

(b) "Definitions."

(1) When used in this section, the following terms have the meanings given below:

"Direct transfer equipment" means any device (including but not limited to, such devices as piping, fittings, flanges, valves, and pumps) that is used to distribute, meter, or control the flow of hazardous waste between a container (i.e., transport vehicle) and a boiler or industrial furnace.

"Container" means any portable device in which hazardous waste is transported, stored, treated, or otherwise handled, and includes transport vehicles that are containers themselves (e.g., tank trucks, tanker-trailers, and rail tank cars), and containers placed on or in a transport vehicle.

(2) This section references several requirements provided in subparts I and J of parts 264 and 265. For purposes of this section, the term "tank systems" in those referenced requirements means direct transfer equipment as defined in paragraph (b)(1) of this section.

(c) "General operating requirements."

(1) No direct transfer of a pumpable hazardous waste shall be conducted from an open-top container to a boiler or industrial furnace.

(2) Direct transfer equipment used for pumpable hazardous waste shall always be closed, except when necessary to add or remove the waste, and shall not be opened, handled, or stored in a manner that may cause any rupture or leak.

(3) The direct transfer of hazardous waste to a boiler or industrial furnace shall be conducted so that it does not:

(i) Generate extreme heat or pressure, fire, explosion, or violent reaction;

(ii) Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;

(iii) Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;

(iv) Damage the structural integrity of the container or direct transfer equipment containing the waste;

(v) Adversely affect the capability of the boiler or industrial furnace to meet the standards provided by Sections 266.104 through 266.107; or

(vi) Threaten human health or the environment.

(4) Hazardous waste shall not be placed in direct transfer equipment, if it could cause the equipment or its secondary containment system to rupture, leak, corrode, or otherwise fail.

(5) The owner or operator of the facility shall use appropriate controls and practices to prevent spills and overflows from the direct transfer equipment or its secondary containment systems. These include at a minimum:

(i) Spill prevention controls (e.g., check valves, dry discount couplings); and

(ii) Automatic waste feed cutoff to use if a leak or spill occurs from the direct transfer equipment.

(d) "Areas where direct transfer vehicles (containers) are located." Applying the definition of container under this section, owners and operators must comply with the following requirements:

(1) The containment requirements of Section 264.175 of this chapter;

(2) The use and management requirements of subpart I, part 265 of this chapter, except for Sections 265.170 and 265.174; and except that in lieu of the special requirements of Section 265.176 for ignitable or reactive waste, the owner or operator may comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjacent property line that can be built upon as required in Tables 2-1 through 2-6 of the National Fire Protection Association's (NFPA) "Flammable and Combustible Liquids Code," (1977 or 1981), (incorporated by reference, see Section 260.11). The owner or 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; and

(3) The closure requirements of Section 264.178 of this chapter.

(e) "Direct transfer equipment." Direct transfer equipment must meet the following requirements:

(1) "Secondary containment." Owners and operators shall comply with the secondary containment requirements of Section 265.193 of this chapter, except for paragraphs 265.193(a), (d), (e), and (i) as follows:

(i) For all new direct transfer equipment, prior to their being put into service; and

(ii) For existing direct transfer equipment within 2 years after August 21, 1991.

(2) "Requirements prior to meeting secondary containment requirements."

(i) For existing direct transfer equipment that does not have secondary containment, the owner or operator shall determine whether the equipment is leaking or is unfit for use. The owner or operator shall obtain and keep on file at the facility a written assessment reviewed and certified by a qualified, registered professional engineer in accordance with Section 270.11(d) of this chapter that attests to the equipment's integrity by August 21, 1992.

(ii) This assessment shall determine whether the direct transfer equipment is adequately designed and has sufficient structural strength and compatibility with the waste(s) to be transferred to ensure that it will not collapse, rupture, or fail. At a minimum, this assessment shall consider the following:

(A) Design standard(s), if available, according to which the direct transfer equipment was constructed;

(B) Hazardous characteristics of the waste(s) that have been or will be handled;

(C) Existing corrosion protection measures;

(D) Documented age of the equipment, if available, (otherwise, an estimate of the age); and

(E) Results of a leak test or other integrity examination such that the effects of temperature variations, vapor pockets, cracks, leaks, corrosion, and erosion are accounted for.

(iii) If, as a result of the assessment specified above, the direct transfer equipment is found to be leaking or unfit for use, the owner or operator shall comply with the requirements of Sections 265.196(a) and (b) of this chapter.

(3) "Inspections and recordkeeping."

(i) The owner or operator must inspect at least once each operating hour when hazardous waste is being transferred from the transport vehicle (container) to the boiler or industrial furnace:

(A) Overall/spill control equipment (e.g., waste-feed cutoff systems, bypass systems, and drainage systems) to ensure that it is in good working order;

(B) The above ground portions of the direct transfer equipment to detect corrosion, erosion, or releases of waste (e.g., wet spots, dead vegetation); and

(C) Data gathered from monitoring equipment and leak-detection equipment, (e.g., pressure and temperature gauges) to ensure that the direct transfer equipment is being operated according to its design.

(ii) The owner or operator must inspect cathodic protection systems, if used, to ensure that they are functioning properly according to the schedule provided by Section 265.195(b) of this chapter;

(iii) Records of inspections made under this paragraph shall be maintained in the operating record at the facility, and available for inspection for at least 3 years from the date of the inspection.

(4) "Design and installation of new ancillary equipment." Owners and operators must comply with the requirements of Section 265.192 of this chapter.

(5) "Response to leaks or spills." Owners and operators must comply with the requirements of Section 265.198 of this chapter.

(6) "Closure." Owners and operators must comply with the requirements of Section 265.197 of this chapter, except for Section 265.197(c)(2) through (c)(4).

266.112 Regulation of residues.

A residue derived from the burning or processing of hazardous waste in a boiler or industrial furnace is not excluded from the definition of a hazardous waste under Section 261.4(b)(4), (7), or (8) unless the device and the owner or operator meet the following requirements:

(a) The device meets the following criteria:

(1) "Boilers." 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) "Ore or mineral furnaces." Industrial furnaces subject to Section 261.4(b)(7) must process at least 50% by weight normal, nonhazardous raw materials;

(3) "Cement kilns." Cement kilns must process at least 50% by weight normal cement-production raw materials;

(b) The owner or operation demonstrates that the hazardous waste does not significantly affect the residue by demonstrating conformance with either of the following criteria:

(1) "Comparison of waste-derived residue with normal residue." The waste-derived residue must not contain Appendix VIII, part 261 constituents (toxic constituents) that could reasonably be attributable to the hazardous waste at concentrations significantly higher than in residue generated without burning or processing of hazardous waste, using the following procedure. Toxic compounds that could reasonable be attributable to burning or processing the hazardous waste (constituents of concern) include toxic constituents in the hazardous waste, and the organic compounds listed in Appendix VIII of this part that may be generated as products of incomplete combustion. Sampling and analyses shall be in conformance with procedures prescribed in the "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", incorporated by reference in Section 260.11(a) of this chapter.

(i) "Normal residue." Concentrations of toxic constituents of concern in normal residue shall be determined based on analyses of a minimum of 10 samples representing a minimum of 10 days of operation. Composite samples may be used to develop a sample for analysis provided that the compositing period does not exceed 24 hours. Ths upper tolerance limit (at 95% confidence with a 95% proportion of the sample distribution) of the concentration in the normal residue shall be considered the statistically-derived concentration in the normal residue. If changes in raw materials or fuels reduce the statistically-derived concentrations of the toxic constituents of concern in the normal residue, the statistically-derived concentrations must be revised or statistically derived concentrations of toxic constituents in normal residue must be established for a new mode of operation with the new raw material or fuel. To determine the upper tolerance limit in the normal residue, the owner or operator shall use statistical procedures prescribed in "Statistical Methodology for Bevill Residue Determinations" in Appendix IX of this part.

(ii) "Waste-derived residue." Waste-derived residue shall be sampled and analyzed as often as necessary to determine whether the residue generated during each 24-hour period has concentrations of toxic constituents that are higher than the concentrations established for the normal residue under paragraph (b)(1)(i) of this section. If so, hazardous waste burning has significantly affected the residue and the residue shall not be excluded from the definition of a hazardous waste. Concentrations of toxic constituents of concern in waste-derived residue shall be determined based on analysis of one or more samples obtained over a 24-hour period. Multiple samples may be analyzed, and multiple samples may be taken to form a composite sample for analysis provided that the sampling period does not exceed 24 hours. If more than one sample is analyzed to characterize waste-derived residues generated over a 24 hour period, the concentration of each toxic constituent shall be the arithmethic mean of the concentrations in the samples. No results may be disregarded; or

(2) "Comparison of waste-derived residue concentrations with health-based limits--"

(i) "Nonmetal constituents." The concentration of each nonmetal toxic constituent of concern (specified in paragraph (b)(1) of this section) in the waste-derived residue must not exceed the health-based level specified in Appendix VII of this part, or the level of detection (using analytical procedures prescribed in SW-846), whichever is higher. If a health-based limit for a constituent of concern is not listed in appendix VII of this part, then a limit of 0.002 micrograms per kilogram or the level of detection (using analytical procedures prescribed in SW-846), whichever is higher, shall be used. The levels specified in appendix VII of this part (and the default level of 0.002 micrograms per kilogram or the level of detection for constituents as identified in Note 1 of appendix VII of this chapter) are administratively stayed under the condition, for those constituents specified in paragraph (b)(1) of this section, that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in § 268.43 of this chapter for F039 nonwastewaters. In complying with those alternative levels, if an owner or operator is unable to detect a constituent despite documenting use of best good-faith efforts as defined by applicable Agency guidance or standards, the owner or operator is deemed to be in compliance for that constituent. Until new guidance or standards are developed, the owner or operator may demonstrate such good-faith efforts by achieving a detection limit for the costituent that does not exceed an order of magnitude above the level provided by §268.43 for F039 nonwastewaters. The stay will remain in effect until further administrative action is taken and notice is published in the Federal Register and the Code of Federal Regulations; and

(ii) "Metal constituents." The concentration of metals in an extract obtained using the Toxicity Characteristic Leaching Procedure of Section 261.24 of this chapter must not exceed the levels specified in Appendix VII of this part; and

(iii) "Sampling and analysis." Waste derived residue shall be sampled and analyzed as often as necessary to determine whether the residue generated during each 24-hour period has concentrations of toxic constituents that are higher than the health-based levels. Concentrations of toxic constituents of concern in the waste-derived residue shall be determined based on analysis of one or more samples obtained over a 24-hour period. Multiple samples may be analyzed, and multiple samples may be taken to form a composite sample for analysis provided that the sampling period does not exceed 24 hours. If more than one sample is analyzed to characterize waste-derived residues generated over a 24-hour period, the concentration of each toxic constituent shall be the arithmetic mean of the concentrations in the samples. No results may be disregarded; and

(c) Records sufficient to document compliance with the provisions of this section must be retained until closure of the boiler or industrial furnace unit. At a minimum, the following shall be recorded.

(1) Levels of constituents in Appendix VIII, part 261, that are present in waste-derived residues;

(2) If the waste-derived residue is compared with normal residue under paragraph (b)(1) of this section:

(i) The levels of constituents in Appendix VIII, part 261, that are present in normal residues; and

(ii) Data and information, including analyses of samples as necessary, obtained to determine if changes in raw materials or fuels would reduce the concentration of toxic constituents of concern in the normal residue.

(f) Appendices to 40 CFR Part 266 are incorporated by reference including subsequent amendments and editions.

APPENDIX I TO PART 266

Appendix I.- Tier I and Tier II Feed Rate and Emissions Screening Limits for Metals

Table I-A.-- Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Noncomplex Terrain (Values for urban areas)

Terrain adjusted eff. stack ht. (m)	Antimony (g/hr)	Barium (g/hr)	Lead (g/hr)	Mercury (g/hr)	Silver (g/hr)	Thallium (g/hr)
4.....	6.0E+01	1.0E+04	1.8E+01	6.0E+01	6.0E+02	6.0E+01
6.....	6.8E+01	1.1E+04	2.0E+01	6.8E+01	6.8E+02	6.8E+01
8.....	7.6E+01	1.3E+04	2.3E+01	7.6E+01	7.6E+02	7.6E+01
10.....	8.6E+01	1.4E+04	2.6E+01	8.6E+01	8.6E+02	8.6E+01
12.....	9.6E+01	1.7E+04	3.0E+01	9.6E+01	9.6E+02	9.6E+01
14.....	1.1E+02	1.8E+04	3.4E+01	1.1E+02	1.1E+03	1.1E+02
16.....	1.3E+02	2.1E+04	3.6E+01	1.3E+02	1.3E+03	1.3E+02
18.....	1.4E+02	2.4E+04	4.3E+01	1.4E+02	1.4E+03	1.4E+02
20.....	1.6E+02	2.7E+04	4.6E+01	1.6E+02	1.6E+03	1.6E+02
22.....	1.8E+02	3.0E+04	5.4E+01	1.8E+02	1.8E+03	1.8E+02
24.....	2.0E+02	3.4E+04	6.0E+01	2.0E+02	2.0E+03	2.0E+02
26.....	2.3E+02	3.9E+04	6.8E+01	2.3E+02	2.3E+03	2.3E+02
28.....	2.6E+02	4.3E+04	7.8E+01	2.6E+02	2.6E+03	2.6E+02
30.....	3.0E+02	5.0E+04	9.0E+01	3.0E+02	3.0E+03	3.0E+02
35.....	4.0E+02	6.6E+04	1.1E+02	4.0E+02	4.0E+03	4.0E+02
40.....	4.6E+02	7.8E+04	1.4E+02	4.6E+02	4.6E+03	4.6E+02
45.....	6.0E+02	1.0E+05	1.8E+02	6.0E+02	6.0E+03	6.0E+02
50.....	7.8E+02	1.3E+05	2.3E+02	7.8E+02	7.8E+03	7.8E+02
55.....	9.6E+02	1.7E+05	3.0E+02	9.6E+02	9.6E+03	9.6E+02
60.....	1.2E+03	2.0E+05	3.6E+02	1.2E+03	1.2E+04	1.2E+03
65.....	1.5E+03	2.5E+05	4.3E+02	1.5E+03	1.5E+04	1.5E+03
70.....	1.7E+03	2.8E+05	5.0E+02	1.7E+03	1.7E+04	1.7E+03
75.....	1.9E+03	3.2E+05	5.8E+02	1.9E+03	1.9E+04	1.9E+03
80.....	2.2E+03	3.6E+05	6.4E+02	2.2E+03	2.2E+04	2.2E+03
85.....	2.5E+03	4.0E+05	7.6E+02	2.5E+03	2.5E+04	2.5E+03
90.....	2.8E+03	4.6E+05	8.2E+02	2.8E+03	2.8E+04	2.8E+03
95.....	3.2E+03	5.4E+05	9.6E+02	3.2E+03	3.2E+04	3.2E+03
100.....	3.6E+03	6.0E+05	1.1E+03	3.6E+03	3.6E+04	3.6E+03
105.....	4.0E+03	6.8E+05	1.2E+03	4.0E+03	4.0E+04	4.0E+03
110.....	4.6E+03	7.8E+05	1.4E+03	4.6E+03	4.6E+04	4.6E+03
115.....	5.4E+03	8.6E+05	1.6E+03	5.4E+03	5.4E+04	5.4E+03
120.....	6.0E+03	1.0E+06	1.8E+03	6.0E+03	6.0E+04	6.0E+03

Table I-B.— Tier I and Tier II Feed Rate and Emissions Screening Limits

for Noncarcinogenic Metals for Facilities in Noncomplex Terrain

[Values for rural areas]

Terrain adjusted eff. stack ht. (m)	Antimony (g/hr)	Barium (g/hr)	Lead (g/hr)	Mercury (g/hr)	Silver (g/hr)	Thallium (g/hr)
4	3.1E+01	5.2E+03	9.4E+00	3.1E+01	3.1E+02	3.1E+01
6	3.6E+01	6.0E+03	1.1E+01	3.6E+01	3.6E+02	3.6E+01
8	4.0E+01	6.8E+03	1.2E+01	4.0E+01	4.0E+02	4.0E+01
10	4.6E+01	7.8E+03	1.4E+01	4.6E+01	4.6E+02	4.6E+01
12	5.8E+01	9.6E+03	1.7E+01	5.8E+01	5.8E+02	5.8E+01
14	6.8E+01	1.1E+04	2.1E+01	6.8E+01	6.8E+02	6.8E+01
16	8.6E+01	1.4E+04	2.6E+01	8.6E+01	8.6E+02	8.6E+01
18	1.1E+02	1.8E+04	3.2E+01	1.1E+02	1.1E+03	1.1E+02
20	1.3E+02	2.2E+04	4.0E+01	1.3E+02	1.3E+03	1.3E+02
22	1.7E+02	2.8E+04	5.0E+01	1.7E+02	1.7E+03	1.7E+02
24	2.2E+02	3.6E+04	6.4E+01	2.2E+02	2.2E+03	2.2E+02
26	2.8E+02	4.6E+04	8.2E+01	2.8E+02	2.8E+03	2.8E+02
28	3.5E+02	5.8E+04	1.0E+02	3.5E+02	3.5E+03	3.5E+02
30	4.3E+02	7.6E+04	1.3E+02	4.3E+02	4.3E+03	4.3E+02
35	7.2E+02	1.2E+05	2.1E+02	7.2E+02	7.2E+03	7.2E+02
40	1.1E+03	1.8E+05	3.2E+02	1.1E+03	1.1E+04	1.1E+03
45	1.5E+03	2.5E+05	4.6E+02	1.5E+03	1.5E+04	1.5E+03
50	2.0E+03	3.3E+05	6.0E+02	2.0E+03	2.0E+04	2.0E+03
55	2.6E+03	4.4E+05	7.8E+02	2.6E+03	2.6E+04	2.6E+03
60	3.4E+03	5.8E+05	1.0E+03	3.4E+03	3.4E+04	3.4E+03
65	4.6E+03	7.6E+05	1.4E+03	4.6E+03	4.6E+04	4.6E+03
70	5.4E+03	9.0E+05	1.6E+03	5.4E+03	5.4E+04	5.4E+03
75	6.4E+03	1.1E+06	1.9E+03	6.4E+03	6.4E+04	6.4E+03
80	7.6E+03	1.3E+06	2.3E+03	7.6E+03	7.6E+04	7.6E+03
85	9.4E+03	1.5E+06	2.8E+03	9.4E+03	9.4E+04	9.4E+03
90	1.1E+04	1.8E+06	3.3E+03	1.1E+04	1.1E+05	1.1E+04
95	1.3E+04	2.2E+06	3.9E+03	1.3E+04	1.3E+05	1.3E+04
100	1.5E+04	2.6E+06	4.6E+03	1.5E+04	1.5E+05	1.5E+04
105	1.8E+04	3.0E+06	5.4E+03	1.8E+04	1.8E+05	1.8E+04
110	2.2E+04	3.6E+06	6.6E+03	2.2E+04	2.2E+05	2.2E+04
115	2.6E+04	4.4E+06	7.8E+03	2.6E+04	2.6E+05	2.6E+04
120	3.1E+04	5.0E+06	9.2E+03	3.1E+04	3.1E+05	3.1E+04

Table I-C.— Tier I and Tier II Feed Rate and Emissions Screening Limits for Noncarcinogenic Metals for Facilities in Complex Terrain (Values for urban and rural areas)

Terrain adjusted eff. stack ht. (m)	Antimony (g/hr)	Barium (g/hr)	Lead (g/hr)	Mercury (g/hr)	Silver (g/hr)	Thallium (g/hr)
4.....	1.4E+01	2.4E+03	4.3E+00	1.4E+01	1.4E+02	1.4E+01
6.....	2.1E+01	3.5E+03	6.2E+00	2.1E+01	2.1E+02	2.1E+01
8.....	3.0E+01	5.0E+03	9.2E+00	3.0E+01	3.0E+02	3.0E+01
10.....	4.3E+01	7.6E+03	1.3E+01	4.3E+01	4.3E+02	4.3E+01
12.....	5.4E+01	9.0E+03	1.7E+01	5.4E+01	5.4E+02	5.4E+01
14.....	6.8E+01	1.1E+04	2.0E+01	6.8E+01	6.8E+02	6.8E+01
16.....	7.8E+01	1.3E+04	2.4E+01	7.8E+01	7.8E+02	7.8E+01
18.....	8.6E+01	1.4E+04	2.6E+01	8.6E+01	8.6E+02	8.6E+01
20.....	9.6E+01	1.6E+04	2.9E+01	9.6E+01	9.6E+02	9.6E+01
22.....	1.0E+02	1.8E+04	3.2E+01	1.0E+02	1.0E+03	1.0E+02
24.....	1.2E+02	1.9E+04	3.5E+01	1.2E+02	1.2E+03	1.2E+02
26.....	1.3E+02	2.2E+04	3.6E+01	1.3E+02	1.3E+03	1.3E+02
28.....	1.4E+02	2.4E+04	4.3E+01	1.4E+02	1.4E+03	1.4E+02
30.....	1.6E+02	2.7E+04	4.6E+01	1.6E+02	1.6E+03	1.6E+02
35.....	2.0E+02	3.3E+04	5.8E+01	2.0E+02	2.0E+03	2.0E+02
40.....	2.4E+02	4.0E+04	7.2E+01	2.4E+02	2.4E+03	2.4E+02
45.....	3.0E+02	5.0E+04	9.0E+01	3.0E+02	3.0E+03	3.0E+02
50.....	3.6E+02	6.0E+04	1.1E+02	3.6E+02	3.6E+03	3.6E+02
55.....	4.6E+02	7.6E+04	1.4E+02	4.6E+02	4.6E+03	4.6E+02
60.....	5.8E+02	9.4E+04	1.7E+02	5.8E+02	5.8E+03	5.8E+02
65.....	6.8E+02	1.1E+05	2.1E+02	6.8E+02	6.8E+03	6.8E+02
70.....	7.8E+02	1.3E+05	2.4E+02	7.8E+02	7.8E+03	7.8E+02
75.....	8.6E+02	1.4E+05	2.6E+02	8.6E+02	8.6E+03	8.6E+02
80.....	9.6E+02	1.6E+05	2.9E+02	9.6E+02	9.6E+03	9.6E+02
85.....	1.1E+03	1.8E+05	3.3E+02	1.1E+03	1.1E+04	1.1E+03
90.....	1.2E+03	2.0E+05	3.6E+02	1.2E+03	1.2E+04	1.2E+03
95.....	1.4E+03	2.3E+05	4.0E+02	1.4E+03	1.4E+04	1.4E+03
100.....	1.5E+03	2.6E+05	4.6E+02	1.5E+03	1.5E+04	1.5E+03
105.....	1.7E+03	2.8E+05	5.0E+02	1.7E+03	1.7E+04	1.7E+03
110.....	1.9E+03	3.2E+05	5.8E+02	1.9E+03	1.9E+04	1.9E+03
115.....	2.1E+03	3.6E+05	6.4E+02	2.1E+03	2.1E+04	2.1E+03
120.....	2.4E+03	4.0E+05	7.2E+02	2.4E+03	2.4E+04	2.4E+03

Table I-D.— Tier I and Tier II Feed Rate and Emissions Screening

Limits for Carcinogenic Metals for Facilities in Noncomplex Terrain

	(Values for use in urban areas)				(Values for use in rural areas)			
Terrain adjusted eff. stack ht. (m)	Arsenic (g/hr)	Cadmium (g/hr)	Chromium (g/hr)	Beryllium (g/hr)	Arsenic (g/hr)	Cadmium (g/hr)	Chromium (g/hr)	Beryllium (g/hr)
4	4.6E-01	1.1E+00	1.7E-01	8.2E-01	2.4E-01	5.8E-01	8.6E-02	4.3E-01
6	5.4E-01	1.3E+00	1.9E-01	9.4E-01	2.8E-01	6.6E-01	1.0E-01	5.0E-01
8	6.0E-01	1.4E+00	2.2E-01	1.1E+00	3.2E-01	7.6E-01	1.1E-01	5.6E-01
10	6.8E-01	1.6E+00	2.4E-01	1.2E+00	3.6E-01	8.6E-01	1.3E-01	6.4E-01
12	7.6E-01	1.8E+00	2.7E-01	1.4E+00	4.3E-01	1.1E+00	1.6E-01	7.8E-01
14	8.6E-01	2.1E+00	3.1E-01	1.5E+00	5.4E-01	1.3E+00	2.0E-01	9.6E-01
16	9.6E-01	2.3E+00	3.5E-01	1.7E+00	6.8E-01	1.6E+00	2.4E-01	1.2E+00
18	1.1E+00	2.6E+00	4.0E-01	2.0E+00	8.2E-01	2.0E+00	3.0E-01	1.5E+00
20	1.2E+00	3.0E+00	4.4E-01	2.2E+00	1.0E+00	2.5E+00	3.7E-01	1.9E+00
22	1.4E+00	3.4E+00	5.0E-01	2.5E+00	1.3E+00	3.2E+00	4.8E-01	2.4E+00
24	1.6E+00	3.9E+00	5.8E-01	2.8E+00	1.7E+00	4.0E+00	6.0E-01	3.0E+00
26	1.8E+00	4.3E+00	6.4E-01	3.2E+00	2.1E+00	5.0E+00	7.6E-01	3.9E+00
28	2.0E+00	4.8E+00	7.2E-01	3.6E+00	2.7E+00	6.4E+00	9.8E-01	5.0E+00
30	2.3E+00	5.4E+00	8.2E-01	4.0E+00	3.5E+00	1.3E+01	1.9E+00	9.6E+00
40	3.6E+00	9.0E+00	1.3E+00	6.8E+00	8.2E+00	2.0E+01	3.0E+00	1.5E+01
45	4.6E+00	1.1E+01	1.7E+00	8.6E+00	1.1E+01	2.8E+01	4.2E+00	2.1E+01
50	6.0E+00	1.4E+01	2.2E+00	1.1E+01	1.5E+01	3.7E+01	5.4E+00	2.8E+01
55	7.6E+00	1.8E+01	2.7E+00	1.4E+01	2.0E+01	5.0E+01	7.2E+00	3.6E+01
60	9.4E+00	2.2E+01	3.4E+00	1.7E+01	2.7E+01	6.4E+01	9.6E+00	4.8E+01
65	1.1E+01	2.8E+01	4.2E+00	2.1E+01	3.6E+01	8.6E+01	1.3E+01	6.4E+01
70	1.3E+01	3.1E+01	4.6E+00	2.4E+01	4.3E+01	1.0E+02	1.5E+01	7.6E+01
75	1.5E+01	3.6E+01	5.4E+00	2.7E+01	5.0E+01	1.2E+02	1.8E+01	9.0E+01
80	1.7E+01	4.0E+01	6.0E+00	3.0E+01	6.0E+01	1.4E+02	2.2E+01	1.1E+02
85	1.9E+01	4.6E+01	6.8E+00	3.4E+01	7.2E+01	1.7E+02	2.6E+01	1.3E+02
90	2.2E+01	5.0E+01	7.8E+00	3.9E+01	8.6E+01	2.0E+02	3.0E+01	1.5E+02
95	2.5E+01	5.8E+01	9.0E+00	4.4E+01	1.0E+02	2.4E+02	3.6E+01	1.8E+02
100	2.8E+01	6.8E+01	1.0E+01	5.0E+01	1.2E+02	2.9E+02	4.3E+01	2.2E+02
105	3.2E+01	7.6E+01	1.1E+01	5.6E+01	1.4E+02	3.4E+02	5.0E+01	2.6E+02
110	3.6E+01	8.6E+01	1.3E+01	6.4E+01	1.7E+02	4.0E+02	6.0E+01	3.0E+02
115	4.0E+01	9.6E+01	1.5E+01	7.2E+01	2.0E+02	5.8E+02	8.6E+01.	4.3E+02

Table I-E.--Tier I and Tier II Feed Rate and Emissions Screening Limits for Carcinogenic Metals for Facilities in Complex Terrain

(Values for use in urban and rural areas)

Terrain adjusted eff. stack ht. (m)	Arsenic (g/hr)	Cadmium (g/hr)	Chromium (g/hr)	Beryllium (g/hr)
4	1.1E-01	2.6E-01	4.0E-02	2.0E-01
6	1.6E-01	3.9E-01	5.8E-02	2.9E-01
8	2.4E-01	5.8E-01	8.6E-02	4.3E-01
10	3.5E-01	8.2E-01	1.3E-01	6.2E-01
12	4.3E-01	1.3E+00	1.9E-01	9.4E-01
16	6.0E-01	1.4E+00	2.2E-01	1.1E+00
18	6.8E-01	1.6E+00	2.4E-01	1.2E+00
20	7.6E-01	1.8E+00	2.7E-01	1.3E+00
22	8.2E-01	1.9E+00	3.0E-01	1.5E+00
24	9.0E-01	2.1E+00	3.3E-01	1.6E+00
26	1.0E+00	2.4E+00	3.6E-01	1.8E+00
28	1.1E+00	2.7E+00	4.0E-01	2.0E+00
30	1.2E+00	3.0E+00	4.4E-01	2.2E+00
35	1.5E+00	3.7E+00	5.4E-01	2.7E+00
40	1.9E+00	4.6E+00	6.8E-01	3.4E+00
45	2.4E+00	5.4E+00	8.4E-01	4.2E+00
50	2.9E+00	6.8E+00	1.0E+00	5.0E+00
55	3.5E+00	8.4E+00	1.3E+00	6.4E+00
60	4.3E+00	1.0E+01	1.5E+00	7.8E+00
65	5.4E+00	1.3E+01	1.9E+00	9.6E+00
70	6.0E+00	1.4E+01	2.2E+00	1.1E+01
75	6.8E+00	1.6E+01	2.4E+00	1.2E+01
80	7.6E+00	1.8E+01	2.7E+00	1.3E+01
85	8.2E+00	2.0E+01	3.0E+00	1.5E+01
90	9.4E+00	2.3E+01	3.4E+00	1.7E+01
95	1.0E+01	2.5E+01	4.0E+00	1.9E+01
100	1.2E+01	2.8E+01	4.3E+00	2.1E+01
105	1.3E+01	3.2E+01	4.8E+00	2.4E+01
110	1.5E+01	3.5E+01	5.4E+00	2.7E+01
115	1.7E+01	4.0E+01	6.0E+00	3.0E+01
120	1.9E+01	4.4E+01	6.4E+00	3.3E+01

Appendix II.-- Tier I Feed Rate Screening Limits for Total Chlorine

Terrain-adjusted effective stack height (m)	Noncomplex Terrain		Complex Terrain
	Urban (g/hr)	Rural (g/hr)	(g/hr)
4	8.2E+01	4.2E+01	1.9E+01
6	9.1E+01	4.8E+01	2.8E+01
8	1.0E+02	5.3E+01	4.1E+01
10	1.2E+02	6.2E+01	5.8E+01
12	1.3E+02	7.7E+01	7.2E+01
14	1.5E+02	9.1E+01	9.1E+01
16	1.7E+02	1.2E+02	1.1E+02
18	1.9E+02	1.4E+02	1.2E+02
20	2.1E+02	1.8E+02	1.3E+02
22	2.4E+02	2.3E+02	1.4E+02
24	2.7E+02	2.9E+02	1.6E+02
26	3.1E+02	3.7E+02	1.7E+02
28	3.5E+02	4.7E+02	1.9E+02
30	3.9E+02	5.8E+02	2.1E+02
35	5.3E+02	9.6E+02	2.6E+02
40	6.2E+02	1.4E+03	3.3E+02
45	8.2E+02	2.0E+03	4.0E+02
50	1.1E+03	2.6E+03	4.8E+02
55	1.3E+03	3.5E+03	6.2E+02
60	1.6E+03	4.6E+03	7.7E+02
65	2.0E+03	6.2E+03	9.1E+02
70	2.3E+03	7.2E+03	1.1E+03
75	2.5E+03	8.6E+03	1.2E+03
80	2.9E+03	1.0E+04	1.3E+03
85	3.3E+03	1.2E+04	1.4E+03
90	3.7E+03	1.4E+04	1.6E+03
95	4.2E+03	1.7E+04	1.8E+03
100	4.8E+03	2.1E+04	2.0E+03
105	5.3E+03	2.4E+04	2.3E+03
110	6.2E+03	2.9E+04	2.5E+03
115	7.2E+03	3.5E+04	2.8E+03
120	8.2E+03	4.1E+04	3.2E+03

Appendix III. to Part 266 – Tier II Emission Rate Screening Limits for Free Chlorine and Hydrogen Chloride

Terrain-adjusted effective stack height (m)	Noncomplex terrain				Complex terrain	
	Values for urban areas		Values for rural areas		Values for use in urban and rural areas	
	Cl_2 (g/hr)	HCl (g/hr)	Cl_2 (g/hr)	HCl (g/hr)	Cl_2 (g/hr)	HCl (g/hr)
6	9.1E+01	1.6E+03	4.8E+01	8.3E+02	2.8E+01	4.9E+02
8	1.0E+02	1.8E+03	5.3E+01	9.2E+02	4.1E+01	7.1E+02
10	1.2E+02	2.0E+03	6.2E+01	1.1E+03	5.8E+01	1.0E+03
12	1.3E+02	2.3E+03	7.7E+01	1.3E+03	7.2E+01	1.3E+03
14	1.5E+02	2.6E+03	9.1E+01	1.6E+03	9.1E+01	1.6E+03
16	1.7E+02	2.9E+03	1.2E+02	2.0E+03	1.1E+02	1.8E+03
18	1.9E+02	3.3E+03	1.4E+02	2.5E+03	1.2E+02	2.0E+03
20	2.1E+02	3.7E+03	1.8E+02	3.1E+03	1.3E+02	2.3E+03
22	2.4E+02	4.2E+03	2.3E+02	3.9E+03	1.4E+02	2.4E+03
24	2.7E+02	4.8E+03	2.9E+02	5.0E+03	1.6E+02	2.8E+03
26	3.1E+02	5.4E+03	3.7E+02	6.5E+03	1.7E+02	3.0E+03
28	3.5E+02	6.0E+03	4.7E+02	8.1E+03	1.9E+02	3.4E+03
30	3.9E+02	6.9E+03	5.8E+02	1.0E+04	2.1E+02	3.7E+03
35	5.3E+02	9.2E+03	9.6E+02	1.7E+04	2.6E+02	4.6E+03
40	6.2E+02	1.1E+04	1.4E+03	2.5E+04	3.3E+02	5.7E+03
45	8.2E+02	1.4E+04	2.0E+03	3.5E+04	4.0E+02	7.0E+03
50	1.1E+03	1.8E+04	2.6E+03	4.6E+04	4.8E+02	8.4E+03
55	1.3E+03	2.3E+04	3.5E+03	6.1E+04	6.2E+02	1.1E+04
60	1.6E+03	2.9E+04	4.6E+03	8.1E+04	7.7E+02	1.3E+04
65	2.0E+03	3.4E+04	6.2E+03	1.1E+05	9.1E+02	1.6E+04
70	2.3E+03	3.9E+04	7.2E+03	1.3E+05	1.1E+03	1.8E+04
75	2.5E+03	4.5E+04	8.6E+03	1.5E+05	1.2E+03	2.0E+04
80	2.9E+03	5.0E+04	1.0E+04	1.8E+05	1.3E+03	2.3E+04
85	3.3E+03	5.8E+04	1.2E+04	2.2E+05	1.4E+03	2.5E+04
90	3.7E+03	6.6E+04	1.4E+04	2.5E+05	1.6E+03	2.9E+04
95	4.2E+03	7.4E+04	1.7E+04	3.0E+05	1.8E+03	3.2E+04
100	4.8E+03	8.4E+04	2.1E+04	3.6E+05	2.0E+03	3.5E+04
105	5.3E+03	9.2E+04	2.4E+04	4.3E+05	2.3E+03	3.9E+04
110	8.2E+03	1.1E+05	2.9E+04	5.1E+05	2.5E+03	4.5E+04
115	7.2E+03	1.3E+05	3.5E+04	6.1E+05	2.8E+03	5.0E+04
120	8.2E+03	1.4E+05	4.1E+04	7.2E+05	3.2E+03	5.6E+04

Appendix IV To Part 266 -- Reference Air Concentrations*

Constituent	CAS No.	RAC (ug/m3
Acetaldehyde	75-07-0	10
Acetonitrile	75-05-8	10
Acetophenone	98-86-2	100
Acrolein	107-02-8	20
Aldicarb	116-06-3	1
Aluminum phosphide	20859-73-8	0.3
Allyl alcohol	107-18-6	5
Antimony	7440-36-0	0.3
Barium	7440-39-3	50
Barium cyanide	542-62-1	50
Bromomethane	74-83-9	0.8
Calcium Cyanide	592-01-8	30
Carbon Disulfide	75-15-0	200
Chloral	75-87-6	2
Chlorine (free)	.....	0.4
2-Chloro-1,3-butadiene	126-99-8	3
Chromium III	16065-83-1	1000
Copper Cyanide	544-92-3	5
Cresols	1319-77-3	50
Cumene	98-82-8	1
Cyanide (free)	57-12-15	20
Cyanogen	460-19-5	30
Cyanogen Bromide	506-68-3	80
Di-n-butyl Phthalate	84-74-2	100
o-Dichlorobenzene	95-50-1	10
p-Dichlorobenzene	106-46-7	10
Dichlorodifluoromethane	75-71-8	200
2,4-Dichlorophenol	120-83-2	3
Diethyl Phthalate	84-66-2	800
Dimethoate	60-51-5	0.8
2,4-Dinitrophenol	51-28-5	2
Dinoseb	88-85-7	0.9
Diphenylamine	122-39-4	20
Endosulfan	115-29-1	0.05
Endrin	72-20-8	0.3
Fluorine	7782-41-4	50
Formic Acid	64-18-6	2000
Glycidylaldehyde	765-34-4	0.3
Hexachlorocyclopentadiene	77-47-4	5
Hexachlorophene	70-30-4	0.3
Hydrocyanic Acid	74-90-8	20
Hydrogen Chloride	7647-01-1	7
Hydrogen Sulfide	7783-06-4	3
Isobutyl Alcohol	78-83-1	300
Lead	7439-92-1	0.09
Maleic Anhydride	108-31-6	100
Mercury	7439-97-6	0.3
Methacrylonitrile	126-98-7	0.1
Methomyl	16752-77-5	20
Methoxychlor	72-43-5	50
Methyl Chlorocarbonate	79-22-1	1000
Methyl Ethyl Ketone	78-93-3	80

Appendix IV To Part 266 -- Reference Air Concentrations*

Constituent	CAS No.	RAC (ug/m3
Methyl Parathion	298-00-0	0.3
Nickel Cyanide	557-19-7	20
Nitric Oxide	10102-43-9	100
Nitrobenzene	98-95-3	0.8
Pentachlorobenzene	608-93-5	0.8
Pentachlorophenol	87-86-5	30
Phenol	108-95-3	30
M-Phenylenediamine	108-45-2	5
Phenylmercuric Acetate	62-38-4	0.075
Phosphine	7803-51-2	0.3
Phthalic Anhydride	85-44-9	2000
Potassium Cyanide	151-50-8	50
Potassium Silver Cyanide	506-61-6	200
Pyridine	110-86-1	1
Selenious Acid	7783-60-8	3
Selenourea	630-10-4	5
Silver	7440-22-4	3
Silver Cyanide	506-64-9	100
Sodium Cyanide	143-33-9	30
Strychnine	57-24-9	0.3
1,2,4,5-Tetrachlorobenzene	95-94-3	0.3
2,3,4,6-Tetrachlorophenol	58-90-2	30
Tetraethyl lead	78-00-2	0.0001
Tetrahydrofuran	109-99-9	10
Thallic oxide	1314-32-5	0.3
Thallium	7440-28-0	0.5
Thallium (I) Acetate	563-68-8	0.5
Thallium (I) Carbonate	6533-73-9	0.3
Thallium (I) Chloride	7791-12-0	0.3
Thallium (I) Nitrate	10102-45-1	0.5
Thallium Selenite	12039-52-0	0.5
Thallium (I) Sulfate	7446-18-6	0.075
Thiram	137-26-8	5
Toluene	108-88-3	300
1,2,4-Trichlorobenzene	120-82-1	20
Trichloromonofluoromethane	75-69-4	300
2,4,5-Trichlorophenol	95-95-4	100
Vanadium Pentoxide	1314-62-1	20
Warfarin	81-81-2	0.3
Xylenes	1330-20-7	80
Zinc Cyanide	557-21-1	50
Zinc phosphide	1314-84-7	0.3

*The RAC for other Appendix VIII Part 261 constituents not listed herein or in Appendix V of this Part is 0.1 ug/m^3.

Appendix V. To Part 266 -- Risk Specific Doses (10^{-5})

Constituent	CAS No.	Unit risk (m3/ug)	RsD (ug/m3)
Acrylamide	79-06-1	1.3E-03	7.7E-03
Acrylonitrile	107-13-1	6.8E-05	1.5E-01
Aldrin	309-00-2	4.9E-03	2.0E-03
Aniline	62-53-3	7.4E-06	1.4E+00
Arsenic	7440-38-2	4.3E-03	2.3E-03
Benz[a]anthracene	71-43-2	8.3E-06	1.2E+00
Benzidine	92-87-5	6.7E-02	1.5E-04
Benzo[a]pyrene	50-32-8	3.3E-03	3.0E-03
Beryllium	7440-41-7	2.4E-03	4.2E-03
Bis(2-chloroethyl)ether	111-44-4	3.3E-04	3.0E-02
Bis(chloromethyl)ether	542-88-1	6.2E-02	1.6E-04
Bis(2-ethylhexyl)-phthalate	117-81-7	2.4E-07	4.2E+01
1,3-Butadiene	106-99-0	2.8E-04	3.6E-02
Cadmium	7440-43-9	1.8E-03	5.6E-03
Carbon tetrachloride	56-23-5	1.5E-05	6.7E-01
Chlordane	57-74-9	3.7E-04	2.7E-02
Chloroform	67-66-3	2.3E-05	4.3E-01
Chloromethane	74-87-3	3.6E-06	2.8E-00
Chromium VI	7440-47-3	1.2E-02	8.3E-04
DDT	50-29-3	9.7E-05	1.0E-01
Dibenz[a,h]anthracene	53-70-3	1.4E-02	7.1E-04
1,2-Dibromo-3-chloropropane	96-12-8	6.3E-03	1.6E-03
1,2-Dibromoethane	106-93-4	2.2E-04	4.5E-02
1,1-Dichloroethane	75-34-3	2.6E-05	3.8E-01
1,2-Dichloroethane	107-06-2	2.6E-05	3.8E-01
1,1-Dichloroethylene	75-35-4	5.0E-05	2.0E-01
1,3-Dichloropropene	542-75-6	3.5E-01	2.9E-05
Dieldrin	60-57-1	4.6E-03	2.2E-03
Diethylstibestrol	56-53-1	1.4E-01	7.1E-05
Dimethylnitrosamine	62-75-9	1.4E-02	7.1E-04
2,4-Dinitrotoluene	121-14-2	8.8E-05	1.1E-01
1,2-Diphenylhydrazine	122-66-7	2.2E-04	4.5E-02
1,4-Dioxane	123-91-1	1.4E-06	7.1E-00
Epichlorohydrin	106-89-8	1.2E-06	8.3E+00
Ethylene Oxide	75-21-8	1.0E-04	1.0E-01
Ethylene Dibromide	106-93-4	2.2E-04	4.5E-02
Formaldehyde	50-00-0	1.3E-05	7.7E-01
Heptachlor	76-44-8	1.3E-03	7.7E-03
Heptachlor Epoxide	1024-57-3	2.6E-03	3.8E-03
Hexachlorobenzene	118-74-1	4.9E-04	2.0E-02
Hexachlorobutadiene	87-68-3	2.0E-05	5.0E-01
Alpha-hexachloro-cyclohexane	319-84-6	1.8E-03	5.6E-03
Beta-hexachlorocyclohexane	319-85-7	5.3E-04	1.9E-02
Gamma-hexachloro-cyclohexane	58-89-9	3.8E-04	2.6E-02
Hexachlorocyclohexane,Technical	.....	5.1E-04	2.0E-02
Hexachlorodibenxo-p-dioxin (1,2 Mixture)	.....	1.3E+0	7.7E-06
Hexachloroethane	67-72-1	4.0E-06	2.5E+00

Appendix V. To Part 266 -- Risk Specific Doses (10^{-5})(Continued)

Constituent	CAS No.	Unit risk (m3/ug)	RsD (ug/m3)
Hydrazine	302-01-2	2.9E-03	3.4E-03
Hydrazine Sulfate	302-01-2	2.9E-03	3.4E-03
3-Methylcholanthrene	56-49-5	2.7E-03	3.7E-03
Methyl Hydrazine	60-34-4	3.1E-04	3.2E-02
Methylene Chloride	75-09-2	4.1E-06	2.4E+00
4,4'-Methylene-bis-2-chloroaniline-	101-14-4	4.7E-05	2.1E-01
Nickel	7440-02-0	2.4E-04	4.2E-02
Nickel Refinery Dust	7440-02-0	2.4E-04	4.2E-02
Nickel Subsulfide	12035-72-2	4.8E-04	2.1E-02
2-Nitropropane	79-46-9	2.7E-02	3.7E-04
N-Nitroso-n-butylamine	924-16-3	1.6E-03	6.3E-03
N-Nitroso-n-methylurea	684-93-5	8.6E-02	1.2E-04
N-Nitrosodiethylamine	55-18-5	4.3E-02	2.3E-04
N-Nitrosopyrrolidine	930-55-2	6.1E-04	1.6E-02
Pentachloronitrobenzene	82-68-8	7.3E-05	1.4E-01
PCBs	1336-36-3	1.2E-03	8.3E-03
Pronamide	23950-58-5	4.6E-06	2.2E+00
Reserpine	50-55-5	3.0E-03	3.3E-03
2,3,7,8-Tetrachloro-dibenzo-p-dioxin	1746-01-6	4.5E+01	2.2E-07
1,1,2,2-Tetrachloroethane	79-34-5	5.8E-05	1.7E-01
Tetrachloroethylene	127-18-4	4.8E-07	2.1E+01
Thiourea	62-56-6	5.5E-04	1.8E-02
1,1,2-Trichloroethane	79-00-5	1.6E-05	6.3E-01
Trichloroethylene	79-01-6	1.3E-06	7.7E+00
2,4,6-Trichlorophenol	88-06-2	5.7E-06	1.8E+00
Toxaphene	8001-35-2	3.2E-04	3.1E-02
Vinyl Chloride	75-01-4	7.1E-06	1.4E+00

Appendix VI. To Part 266 -- Stack Plume Rise

[Estimated Plume Rise (in Meters) Based on
Stack Exit Flow Rate and Gas Temperature]

	Exhaust Temperature (K°)										
Flow rate (m3/s)	< 325	325-349	350-399	400-449	450-499	500-599	600-699	700-799	800-999	1000-1499	>1499
< 0.5	0	0	0	0	0	0	0	0	0	0	0
0.5-0.9	0	0	0	0	0	0	0	0	1	1	1
1.0-1.9	0	0	0	0	1	1	2	3	3	3	4
2.0-2.9	0	0	1	3	4	4	6	6	7	8	9
3.0-3.9	0	1	2	5	6	7	9	10	11	12	13
4.0-4.9	1	2	4	6	8	10	12	13	14	15	17
5.0-7.4	2	3	5	8	10	12	14	16	17	19	21
7.5-9.9	3	5	8	12	15	17	20	22	22	23	24
10.0-12.4	4	6	10	15	19	21	23	24	25	26	27
12.5-14.9	4	7	12	18	22	23	25	26	27	28	29
15.0-19.9	5	8	13	20	23	24	26	27	28	29	31
20.0-24.9	6	10	17	23	25	27	29	30	31	32	34
25.0-29.9	7	12	20	25	27	29	31	32	33	35	36
30.0-34.9	8	14	22	26	29	31	33	35	36	37	39
35.0-39.9	9	16	23	28	30	32	35	36	37	39	41
40.0-49.9	10	17	24	29	32	34	36	38	39	41	42
50.0-59.9	12	21	26	31	34	36	39	41	42	44	46
60.0-69.9	14	22	27	33	36	39	42	43	45	47	49
70.0-79.9	16	23	29	35	38	41	44	46	47	49	51
80.0-89.9	17	25	30	36	40	42	46	48	49	51	54
90.0-99.9	19	26	31	38	42	44	48	50	51	53	56
100.0-119.9	21	26	32	39	43	46	49	52	53	55	58
120.0-139.9	22	28	35	42	46	49	52	55	56	59	61
140.0-159.9	23	30	36	44	48	51	55	58	59	62	65
160.0-179.9	25	31	38	46	50	54	58	60	62	65	67
180.0-199.9	26	32	40	48	52	56	60	63	65	67	70
>199.9	26	33	41	49	54	58	62	65	67	69	73

Appendix VII To Part 266.--Health-Based Limits for Exclusion of Waste Derived Residues*

Metals--TCLP Extract Concentration Limits

Constituent	CAS No. (mg/l)	Concentration Limits
Antimony	7440-36-0	1xE+00
Arsenic	7440-38-2	5xE+00
Barium	7440-39-3	1xE+02
Beryllium	7440-41-7	7xE-03
Cadmium	7440-43-9	1xE+00
Chromium	7440-47-3	5xE+00
Lead	7439-92-1	5xE+00
Mercury	7439-97-6	2xE-01
Nickel	7440-02-0	7xE+01
Selenium	7782-49-2	1xE+00
Silver	7440-22-4	5xE+00
Thallium	7440-28-0	7xE+00

Nonmetals--Residue Concentration Limits

Constituent	CAS No.	Concentration Limits for residues (mg/kg)
Acetonitrile	75-05-8	2xE-01
Acetophenone	98-86-2	4xE+00
Acrolein	107-02-8	5xE-01
Acrylamide	79-06-1	2xE-04
Acrylonitrile	107-13-1	7xE-04
Aldrin	309-00-2	2xE-05
Allyl alcohol	107-18-6	2xE-01
Aluminum phosphide	20859-73-8	1xE-02
Aniline	62-53-3	6xE-02
Barium cyanide	542-62-1	1xE+00
Benz(a)anthracene	56-55-3	1xE-04
Benzene	71-43-2	5xE-03
Benzidine	92-87-5	1xE-06
Bis(2-chloroethyl) ether	111-44-4	3xE-04
Bis(chloromethyl) ether	542-88-1	2xE-06
Bis(2-ethylhexyl) phthalate	117-81-7	3xE+01
Bromoform	75-25-2	7xE-01
Calcium cyanide	592-01-8	1xE-06
Carbon disulfide	75-15-0	4xE+00
Carbon tetrachloride	56-23-5	5xE-03
Chlordane	57-74-9	3xE-04
Chlorobenzene	108-90-7	1xE+00
Chloroform	67-66-3	6xE-02
Copper cyanide	544-92-3	2xE-01
Cresols (Cresylic acid)	1319-77-3	2xE+00

Nonmetals--Residue Concentration Limits

Constituent	CAS No.	Concentration Limits for residues (mg/kg)
Cyanogen	460-19-5	1xE+00
DDT	50-29-3	1xE-03
Dibenz[a,h]anthracene	53-70-3	7xE-06
1,2-Dibromo-3-chloropropane	96-12-8	2xE-05
p-Dichlorobenzene	106-46-7	7.5xE-02
Dichlorodifluoromethane	75-71-8	7xE+00
1,1-Dichloroethylene	75-35-4	5xE-03
2,4-Dichlorophenol	120-83-2	1xE-01
1,3-Dichloropropene	542-75-6	1xE-03
Dieldrin	60-57-1	2xE-05
Diethyl Phthalate	84-66-2	3xE+01
Diethylstilbesterol	56-53-1	7xE-07
Dimethoate	60-51-5	3xE-02
2,4-Dinitrotoluene	121-14-2	5xE-04
Diphenylamine	122-39-4	9xE-01
1,2-Diphenylhydrazine	122-66-7	5xE-04
Endosulfan	115-29-7	2xE-03
Endrin	72-20-8	2xE-04
Epichlorohydrin	106-89-8	4xE-02
Ethylene dibromide	106-93-4	4xE-07
Ethylene oxide	75-21-8	3xE-04
Fluorine	7782-41-4	4xE+00
Formic Acid	64-18-6	7xE+01
Heptachlor	76-44-8	8xE-05
Heptachlor epoxide	1024-57-3	4xE-05
Hexachlorobenzene	118-74-1	2xE-04
Hexachlorobutadiene	87-68-3	5xE-03
Hexachlorocyclopentadiene	77-47-4	2xE-01
Hexachlorodibenzo-p-dioxins	19408-74-3	6xE-08
Hexachloroethane	67-72-1	3xE-02
Hydrazine	302-01-1	1xE-04
Hydrogen cyanide	74-90-8	7xE-05
Hydrogen sulfide	7783-06-4	1xE-06
Isobutyl alcohol	78-83-1	1xE+01
Methomyl	16752-77-5	1xE+00
Methoxychlor	72-43-5	1xE-01
3-Methylcholanthrene	56-49-5	4xE-05
4,4'- Methylenebis(2-chloroaniline)	101-14-4	2xE-03
Methylene chloride	75-09-2	5xE-02
Methyl ethyl ketone (MEK)	78-93-3	2xE+00
Methyl hydrazine	60-34-4	3xE-04
Methyl parathion	298-00-0	2xE-02
Naphthalene	91-20-3	1xE+01
Nickel cyanide	557-19-7	7xE-01
Nitric oxide	10102-43-9	4xE+00
Nitrobenzene	98-95-3	2xE-02
N-Nitrosodi-n-butylamine	924-16-3	6xE-05
N-Nitrosodiethylamine	55-18-5	2xE-06
N-Nitroso-N-methylurea	684-93-5	1xE-07
N-Nitrosopyrrolidine	930-55-2	2xE-04

Nonmetals--Residue Concentration Limits

Constituent	CAS No.	Concentration Limits for residues (mg/kg)
Pentachlorobenzene	608-93-5	3xE-02
Pentachloronitrobenzene (PCNB)	82-68-8	1xE-01
Pentachlorophenol	87-86-5	1xE+00
Phenol	108-95-2	1xE+00
Phenylmercury acetate	62-38-4	3xE-03
Phosphine	7803-51-2	1xE-02
Polychlorinated biphenyls, N.O.S.	1336-36-3	5xE-05
Potassium cyanide	151-50-8	2xE+00
Potassium silver cyanide	506-61-6	7xE+00
Pronamide	23950-58-5	3xE+00
Pyridine	110-86-1	4xE-02
Reserpine	50-55-5	3xE-05
Selenourea	630-10-4	2xE-01
Silver cyanide	506-64-9	4xE+00
Sodium cyanide	143-33-9	1xE+00
Strychnine	57-24-9	1xE-02
1,2,4,5-Tetrachlorobenzene	95-94-3	1xE-02
1,1,2,2- tetrachloroethane	79-34-5	2xE-03
Tetrachloroethylene	127-18-4	7xE-01
2,3,4,6-Tetrachlorophenol	58-90-2	1xE-02
Tetraethyl lead	78-00-2	4xE-06
Thiourea	62-56-6	2xE-04
Toluene	108-88-3	1xE+01
Toxaphene	8001-35-2	5xE-03
1,1,2-Trichloroethane	79-00-5	6xE-03
Trichloroethylene	79-01-6	5xE-03
Trichloromonofluoromethane	75-69-4	1xE+01
2,4,5-Trichlorophenol	95-95-4	4xE+00
2,4,6-Trichlorophenol	88-06-2	4xE+00
Vanadium pentoxide	1314-62-1	7xE-01
Vinyl chloride	75-01-4	2xE-03

*{Note 1: The health-based concentration limits for Appendix VIII Part 261 constituents for which a health-based concentration is not provided below is 2xE-06 mg/kg.}

{Note 2: The levels specified in this appendix and the default level of 0.002 micrograms per kilogram or the level of detection for constituents as identified in Note 1 of this appendix are administratively stayed under the condition, for those constituents specified in §266.112(b)(1), that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in §268.43 of this chapter for F039 nonwastewaters. See §266.112(b)(2)(i).}

Appendix VIII.--Potential PICs for Determination of Exclusion of Waste-Derived Residues

PICs Found in Stack Effluents

Volatiles	Semivolatiles
Benzene	Bis(2-ethylhexyl)phthalate
Toluene	Naphthalene
Carbon tetrachloride	Phenol
Chloroform	Diethyl phthalate
Methylene chloride	Butyl benzyl phthalate
Trichloroethylene	2,4-Dimethylphenol
Tetrachloroethylene	o-Dichlorobenzene
1,1,1-Trichloroethane	m-Dichlorobenzene
Chlorobenzene	p-Dichlorobenzene
cis-1,4-Dichloro-2-butene	Hexachlorobenzene
Bromochloromethane	2,4,6-Trichlorophenol
Bromodichloromethane	Fluoranthene
Bromoform	o-Nitrophenol
Bromomethane	1,2,4-Trichlorobenzene
Methylene bromide	o-Chlorophenol
Methyl ethyl ketone	Pentachlorophenol
	Pyrene
	Dimethyl phthalate
	Mononitrobenzene
	2,6-Toluene diisocyanate

Editorial Note:
Appendix IX which is incorporated by reference, is the Methods Manual for Compliance with BIF Regulations, U.S. EPA, December 1990; copies are available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161, (703) 487-4600, document number PB91-120-006.

Appendix X: Reserved

Appendix XI To Part 266 Lead-Bearing Materials That May be Processed in Exempt Lead Smelters

A. Exempt Lead-Bearing Materials When Generated or Originally Produced By Lead-Associated Industries[1]

Acid dump/fill solids
Sump mud
Materials from laboratory analyses
Acid filters
Baghouse bags
Clothing (e.g., coveralls, aprons, shoes, hats, gloves)
Sweepings
Air filter bags and cartridges
Respiratory cartridge filters
Shop abrasives
Stacking boards
Waste shipping containers (e.g., cartons, bags, drums, cardboard)
Paper hand towels

Wiping rags and sponges
Contaminated pallets
Water treatment sludges, filter cakes, residues, and solids
Emission control dusts, sludges, filter cakes, residues, and solids from lead-associated industries (e.g., K069 and D008 wastes)
Spent grids, posts, and separators
Spent batteries
Lead oxide and lead oxide residues
Lead plates and groups
Spent battery cases, covers, and vents
Pasting belts
Water filter media
Cheesecloth from pasting rollers
Pasting additive bags
Asphalt paving materials

B. Exempt Lead-Bearing Materials When Generated or Originally Produced By Any Industry.

Charging jumpers and clips
Platen abrasive
Fluff from lead wire and cable casings
Lead-based pigments and compounding pigment dust

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[1]Lead-associates industries are lead smelters, lead-acid battery manufacturing, and lead chemical manufacturing (e.g., manufacturing of lead oxide or other lead compounds).

Appendix XII To Part 266 -- Nickel or Chromium-Bearing Materials that may be Processed in Exempt Nickel-Chromium Recovery Furnaces

A. Exempt Nickel or Chromium-Bearing Materials when Generated by Manufacturers or Users of Nickel, Chromium, or Iron

Baghouse bags
Raney nickel catalyst
Floor sweepings
Air filters
Electroplating bath filters
Wastewater filter media
Wood pallets
Disposable clothing (coveralls, aprons, hats, and gloves)
Laboratory samples and spent chemicals
Shipping containers and plastic liners from containers or vehicles used to transport nickel or chromium-containing wastes
Respirator cartridge filters
Paper hand towels

B. Exempt Nickel or Chromium-Bearing Materials when Generated by Any Industry

Electroplating wastewater treatment sludges (F006)
Nickel and/or chromium-containing solutions
Nickel, chromium, and iron catalysts
Nickel-cadmium and nickel-iron batteries
Filter cake from wet scrubber system water treatment plants in the specialty steel industry[1]
Filter cake from nickel-chromium alloy pickling operations[1]

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[1]If a hazardous waste under an authorized State program.

Appendix XIII to Part 266 -- Mercury Bearing Wastes That May Be Processed in Exempt Mercury Recovery Units

These are exempt mercury-bearing materials with less than 500 ppm of 40 CFR Part 261, appendix VIII organic constituents when generated by manufacturers or users of mercury or mercury products.

1. Activated carbon
2. Decomposer graphite
3. Wood
4. Paper
5. Protective clothing
6. Sweepings
7. Respiratory cartridge filters
8. Cleanup articles
9. Plastic bags and other contaminated containers
10. Laboratory and process control samples
11. K106 and other wastewater treatment plant sludge and filter cake
12. Mercury cell sump and tank sludge
13. Mercury cell process solids
14. Recoverable levels or mercury contained in soil

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. July 1, 1985;
Amended Eff. June 1, 1990; November 1, 1989;
June 1, 1988; February 1, 1988; December 1, 1987;
October 1, 1986; May 1, 1986; January 1, 1986; October 1, 1985.
Transferred and Recodified from 10 NCAC 10F .0039 Eff. April 4, 1990;
Amended Eff. January 1, 1995; April 1, 1993; August 1, 1991; October 1, 1990;
August 30, 1990;
Recodified from 15A NCAC 13A .0011 Eff. December 20, 1996.

.0012 LAND DISPOSAL RESTRICTIONS - PART 268

(a) 40 CFR 268.1 through 268.14 (Subpart A), "General", are incorporated by reference including subsequent amendments and editions.

SUBPART A - GENERAL

268.1 Purpose, scope and applicability.

(a) This part identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances under which an otherwise prohibited waste may continue to be land disposed.

(b) Except as specifically provided otherwise in this part or Part 261 of this chapter, the requirements of this part apply to persons who generate or transport hazardous waste and owners and operators of hazardous waste treatment, storage, and disposal facilities.

(c) Restricted wastes may continue to be land disposed as follows:
  (1) Where persons have been granted an extension to the effective date of a prohibition under Subpart C of this part or pursuant to Section 268.5, with respect to those wastes covered by the extension;
  (2) Where persons have been granted an exemption from a prohibition pursuant to a petition under Section 268.6, with respect to those wastes and units covered by the petition;
  (3) Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited from under this part, or part 148 of this chapter, are not if the wastes:
    (i) Are disposed into a nonhazardous or hazardous injection well as defined under 40 CFR 146.6(a); and
    (ii) Do not exhibit any prohibited characteristic of hazardous waste identified in 40 CFR part 261, subpart C at the point of injection.
  (4) Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under this part, are not prohibited if the wastes meet any of the following criteria, unless the wastes are subject to a specified method of treatment other than DEACT in Section 268.40, or are D003 reactive cyanide:
    (i) The wastes are managed in a treatment system which subsequently discharges to waters of the U.S. pursuant to a permit issued under section 402 of the Clean Water Act; or
    (ii) The wastes are treated for purposes of the pretreatment requirements of section 307 of the Clean Water Act; or
    (iii) The wastes are managed in a zero discharge system engaged in Clean Water Act-equivalent treatment as defined in Section 268.37(a); and
    (iv) The wastes no longer exhibit a prohibited characteristic at the point of land disposal (i.e., placement in a surface impoundment).

(d) The requirements of this part shall not affect the availability of a waiver under section 121(d)(4) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

(e) The following hazardous wastes are not subject to any provision of part 268:
  (1) Waste generated by small quantity generators of less than 100 kilograms of non-acute hazardous waste or less than 1 kilogram of acute hazardous waste per month, as defined in Section 261.5 of this chapter;
  (2) Waste pesticides that a farmer disposes of pursuant to Section 262.70;
  (3) Wastes identified or listed as hazardous after November 8, 1984 for which EPA has not promulgated land disposal prohibitions or treatment standards; or
  (4) *De minimis* losses of characteristic wastes to wastewaters are not considered to be prohibited wastes and are defined as:
    (i) Losses from normal material handling operations (e.g. spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; and relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; rinsate from empty containers or from containers that are rendered empty by that rinsing; and laboratory wastes not exceeding one per cent of the total flow of wastewater into the facility's

headworks on an annual basis, or with a combined annualized average concentration not exceeding one part per million in the headworks of the faciility's wastewater treatment or pretreatment facility; or

(ii) Decharacterized wastes which are injected into Class I nonhazardous wells which wastes combined volume is less than one per cent of the total flow at the wellhead on an annualized basis, is no greater than 10,000 gallons per day, and in which any underlying hazardous constituents in the characteristic wastes are present at the point of generation at levels less than ten times the treatment standards found at Section 268.48.

(f) Universal waste handlers and universal waste transporters (as defined in 40 CFR 260.10) are exempt from 40 CFR 268.7 and 268.50 for the hazardous waste listed below. These handlers are subject to regulation under 40 CFR part 273.

(1) Batteries as described in 40 CFR 273.2;
(2) Pesticides as described in 40 CFR 273.3; and
(3) Thermostats as described in 40 CFR 273.4.

268.2 Definitions applicable to this part.

When used in this part, the following terms have the meanings given below:

(a) *Halogenated organic compounds* or "HOCs" means those compounds having a carbon-halogen bond which are listed under Appendix III to this part.

(b) *Hazardous constituent or constituents* means those constituents listed in Appendix VIII to Part 261 of this chapter.

(c) *Land disposal* means placement in or on the land, except in a corrective action management unit, and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, underground mine or cave, or placement in a concrete vault, or bunker intended for disposal purposes.

(d) *Nonwastewaters* are wastes that do not meet the criteria for wastewaters in paragraph (f) of this section.

(e) *Polychlorinated biphenyls* or "PCBs" are halogenated organic compounds defined in accordance with 40 CFR 761.3.

(f) *Wastewaters* are wastes that contain less than 1% by weight total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS.

(g) *Debris* means solid material exceeding a 60 mm particle size that is intended for disposal and that is: A manufactured object; or plant or animal matter; or natural geologic material. However, the following materials are not debris: Any material for which a specific treatment standard is provided in Subpart D, Part 268, namely lead acid batteries, cadmium batteries, and radioactive lead solids; Process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and Intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by Section 268.45 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

(h) *Hazardous debris* means debris that contains a hazardous waste listed in subpart D of part 261 of this chapter, or that exhibits a characteristic of hazardous waste identified in subpart C of part 261 of this chapter.

(i) *Underlying hazardous constituent* means any constituent listed in Section 268.48, Table UTS–Universal Treatment Standards, except fluoride, vanadium and zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste, at a concentration above the constituent-specific UTS treatment standards.

(j) *Inorganic metal-bearing waste* is one for which EPA has established treatment standards for metal hazardous constituents, and which does not otherwise contain significant organic or cyanide content as described in Section 268.3(c)(1), and is specifically listed in appendix XI of this part.

(k) *End-of-pipe* refers to the point where effluent is discharged to the environment.

(l) *Stormwater impoundments* are surface impoundments which receive wet weather flow, and only receive process waste during wet weather events.

268.3 Dilution prohibited as a substitute for treatment.

(a) No generator, transporter, handler, or owner or operator of a treatment, storage, or disposal facility shall in any way dilute a restricted waste or the residual from treatment of a restricted waste as a substitute for adequate treatment to achieve compliance with Subpart D of this part, to circumvent the effective date of a prohibition in Subpart C of this part, to otherwise avoid a prohibition in Subpart C of this part, or to circumvent a land disposal prohibition imposed by RCRA Section 3004.

(b) Dilution of wastes that are hazardous only because they exhibit a characteristic in treatment systems which include land-based units which treat wastes subsequently discharged to a water of the United States pursuant to a permit issued under section 402 of the Clean Water Act (CWA), or which treat wastes in a CWA-equivalent treatment system, or which treat wastes for the purposes of pretreatment requirements under section 307 of the CWA is not impermissible dilution for the purposes of this section unless a method other than DEACT has been specified in Section 268.40 as the treatment standard, or unless the waste is a D003 reactive cyanide wastewater or nonwastewater.

(c) Combustion of the hazardous waste codes listed in Appendix XI of this part is prohibited, unless the waste, at the point of generation, or after any bona fide treatment such as cyanide destruction prior to combustion, can be demonstrated to comply with one or more of the following criteria (unless otherwise specifically prohibited from combustion):
   (1) the waste contains hazardous organic constituents or cyanide at levels exceeding the constituent-specific treatment standard found in Section 268.48;
   (2) The waste consists of organic, debris-like materials (e.g., wood, paper, plastic, or cloth) contaminated with an inorganic metal-bearing hazardous waste;
   (3) The waste, at point of generation, has reasonable heating value such as greater than or equal to 5000 BTU per pound;
   (4) The waste is co-generated with wastes for which combustion is a required method of treatment;
   (5) The waste is subject to Federal and/or State requirements necessitating reduction of organics (including biological agents); or
   (6) The waste contains greater than 1% Total Organic Carbon (TOC).

268.4 Treatment surface impoundment exemption.

(a) Wastes which are otherwise prohibited from land disposal under this part may be treated in a surface impoundment or series of impoundments provided that:
   (1) Treatment of such wastes occurs in the impoundments;
   (2) The following conditions are met:
      (i) *Sampling and testing.* For wastes with treatment standards in Subpart D of this part and/or prohibition levels in Subpart C of this part or RCRA section 3004(d), the residues from treatment are analyzed, as specified in Section 268.7 or Section 268.32, to determine if they meet the applicable treatment standards or where no treatment standards have been established for the waste, the applicable prohibition levels. The sampling method, specified in the waste analysis plan under Section 264.13 or Section 265.13, must be designed such that representative samples of the sludge and the supernatant are tested separately rather than mixed to form homogeneous samples.
      (ii) *Removal.* The following treatment residues (including any liquid waste) must be removed at least annually: residues which do not meet the treatment standards promulgated under Subpart D of this part; residues which do not meet the prohibition levels established under Subpart C of this part or imposed by statute (where no treatment standards have been established); residues which are from the treatment of wastes prohibited from land disposal under Subpart C of this part (where no treatment standards have been established and no prohibition levels apply); or residues from managing listed wastes which are not delisted under Section 260.22 of this chapter. However, residues which are the subject of a valid certification under Section 268.8 made no later than a year after placement of the wastes in an impoundment are not required to be removed annually. If the volume of liquid flowing through the impoundment or series of impoundments annually is greater than the volume of the impoundment or impoundments, this flow-through constitutes removal of the supernatant for the purpose of this requirement.
      (iii) *Subsequent management:* Treatment residues may not be placed in any other surface impoundment for subsequent management unless the residues are the subject of a valid certification under Section 268.8 which allows disposal in surface impoundments meeting the requirements of section 268.8(a).

(iv) *Recordkeeping.* The procedures and schedule for the sampling of impoundment contents, the analysis of test data, and the annual removal of residues which do not meet the treatment standards, or prohibition levels (where no treatment standards have been established), or which are from the treatment of wastes prohibited from land disposal under Subpart C (where no treatment standards have been established and no prohibition levels apply), must be specified in the facility's waste analysis plan as required under Section 264.13 or Section 265.13 of this chapter.

(3) The impoundment meets the design requirements of Sections 264.221(c) or 265.221(a) of this chapter, regardless that the unit may not be new, expanded, or a replacement, and be in compliance with applicable ground water monitoring requirements of Subpart F of Part 264 or Part 264 of this chapter, unless:

(i) Exempted pursuant to Section 264.221(d) or (e) of this chapter, or to Section 265.221(c) or (d) of this chapter; or

(ii) Upon application by the owner or operator, the Administrator, after notice and an opportunity to comment, has granted a waiver of the requirements on the basis that the surface impoundment:

(A) Has at least one liner, for which there is no evidence that such liner is leaking;

(B) Is located more than one-quarter mile from an underground source of drinking water; and

(C) Is in compliance with generally applicable ground water monitoring requirements for facilities with permits; or

(iii) Upon application by the owner or operator, the Administrator, after notice and an opportunity to comment, has granted a modification to the requirements on the basis of a demonstration that the surface impoundment is located, designed, and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

(4) The owner or operator submits to the Regional Administrator a written certification that the requirements of Section 268.4(a)(3) have been met and submits a copy of the waste analysis plan required under Section 268.4(a)(2). The following certification is required:

I certify under penalty of law that the requirements of 40 CFR 268.4(a)(3) have been met for all surface impoundments being used to treat restricted wastes. I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(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.

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 to the Administrator for an extension to the effective date of any applicable restriction established under Subpart C of this part. The applicant must demonstrate the following:

(1) He has made a good-faith effort to locate and contract with treatment, recovery, or disposal facilities nationwide to manage his waste in accordance with the effective date of the applicable restriction established under Subpart C of this part;

(2) He has entered into a binding contractual commitment to construct or otherwise provide alternative treatment, recovery (e.g., recycling), or disposal capacity that meets the treatment standards specified in Subpart D or, where treatment standards have not been specified, such treatment, recovery, or disposal capacity is protective of human health and the environment;

(3) Due to circumstances beyond the applicant's control, such alternative capacity cannot reasonably be made available by the applicable effective date. This demonstration may include a showing that the technical and practical difficulties associated with providing the alternative capacity will result in the capacity not being available by the applicable effective date;

(4) The capacity being constructed or otherwise provided by the applicant will be sufficient to manage the entire quantity of waste that is the subject of the application;

(5) He provides a detailed schedule for obtaining required operating and construction permits or an outline of how and when alternative capacity will be available;

(6) He has arranged for adequate capacity to manage his waste during an extension and has documented in the application the location of all sites at which the waste will be managed; and

(7) Any waste managed in a surface impoundment or landfill during the extension period will meet the requirements of paragraph (h)(2) of this section.

(b) An authorized representative signing an application described under paragraph (a) of this section shall make the following certification:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(c) After receiving an application for an extension, the Administrator may request any additional information which he deems as necessary to evaluate the application.

(d) An extension will apply only to the waste generated at the individual facility covered by the application and will not apply to restricted waste from any other facility.

(e) On the basis of the information referred to in paragraph (a) of this section, after notice and opportunity for comment, and after consultation with appropriate State agencies in all affected states, the Administrator may grant an extension of up to one year from the effective date. The administrator may renew this extension for up to one additional year upon the request of the applicant if the demonstration required in paragraph (a) of this section can still be made. In no event will an extension extend beyond 24 months from the applicable effective date specified in Subpart C of Part 268. The length of any extension authorized will be determined by the Administrator based on the time required to construct or obtain the type of capacity needed by the applicant as described in the completion schedule discussed in paragraph (a)(5) of this section. The Administrator will give public notice of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a petition will be published in the Federal Register.

(f) Any person granted an extension under this section must immediately notify the Administrator as soon as he has knowledge of any change in the conditions certified to in the application.

(g) Any person granted an extension under this section shall submit written progress reports at intervals designated by the Administrator. Such report must describe the overall progress made toward constructing or otherwise providing alternative treatment, recovery or disposal capacity; must identify any event which may cause or has caused a delay in the development of the capacity; and must summarize the steps taken to mitigate the delay. The Administrator can revoke the extension at any time if the applicant does not demonstrate a good-faith effort to meet the schedule for completion, if the Agency denies or revokes any required permit, if conditions certified in the application change, or for any violation of this chapter.

(h) Whenever the Administrator establishes an extension to an effective date under this section during the period for which such extension is in effect:

(1) The storage restrictions under Section 268.50(a) do not apply; and

(2) Such hazardous waste may be disposed in a landfill or surface impoundment only if such unit is in compliance with the technical requirements of the following provisions regardless of whether such unit is existing, new, or a replacement or lateral expansion.

(i) The landfill, if in interim status, is in compliance with the requirements of Subpart F of Part 265 and Section 265.301(a), (c) and (d) of this chapter; or

(ii) The landfill, if permitted, is in compliance with the requirements of Subpart F of Part 264 and Section 264.301(c), (d) and (e) of this chapter; or

(iii) The surface impoundment, if in interim status, is in compliance with the requirements of Subpart F of Part 265, Section 265.221(a), (c) and (d) of this chapter, and RCRA Section 3005(j)(1); or

(iv) The surface impoundment, if permitted, is in compliance with the requirements of Subpart F of Part 264 and Section 264.221(c), (d) and (e) of this chapter; or

(v) The surface impoundment, if newly subject to RCRA section 3005(j)(1) due to the promulgation of additional listings or characteristics for the identification of hazardous waste, is in compliance with the requirements of subpart F of part 265 of this chapter within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of Section 265.221(a), (c) and (d) of this chapter within 48 months after the promulgation of additional listings or characteristics of hazardous waste. If a national capacity variance is granted, during the period the variance is in effect, the surface impoundment, if newly subject to RCRA section 3005(j)(1) due to the promulgation of additional listings or characteristics of hazardous waste, is in compliance with the requirements of subpart F of part 265 of this chapter within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of

Section 265.221(a),(c) and (d) of this chapter within 48 months after the promulgation of additional listings or characteristics of hazardous waste; or

(vi) The landfill, if disposing of containerized liquid hazardous wastes containing PCBs at concentrations greater than or equal to 50 ppm but less than 500 ppm, is also in compliance with the requirements of 40 CFR 761.75 and Parts 264 and 265.

(i) Pending a decision on the application, the applicant is required to comply with all restrictions on land disposal under this part once the effective date for the waste has been reached.

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 of this part for the disposal of a restricted hazardous waste in a particular unit or units must submit a petition to the Administrator demonstrating, to a reasonable degree of certainty, that there will be no migration of hazardous constituents from the disposal unit or injection zone for as long as the wastes remain hazardous. The demonstration must include the following components:
  (1) An identification of the specific waste and the specific unit for which the demonstration will be made;
  (2) A waste analysis to describe fully the chemical and physical characteristics of the subject waste;
  (3) A comprehensive characterization of the disposal unit site, including an analysis of background air, soil, and water quality.
  (4) A monitoring plan that detects migration at the earliest practicable time;
  (5) Sufficient information to assure the Administrator that the owner or operator of a land disposal unit receiving restricted waste(s) will comply with other applicable Federal, State, and local laws.

(b) The demonstration referred to in paragraph (a) of this section must meet the following criteria:
  (1) All waste and environmental sampling, and test and analysis data must be accurate and reproducible to the extent that state-of-the-art techniques allow;
  (2) All sampling, testing and estimation techniques for chemical and physical properties of the waste and all environmental parameters must have been approved by the Administrator;
  (3) Simulation models must be calibrated for the specific waste and site conditions and verified for accuracy by comparison with actual measurements;
  (4) A quality assurance and quality control plan that addresses all aspects of the demonstration must be approved by the Administrator; and
  (5) An analysis must be performed to identify and quantify any aspects of the demonstration that contribute significantly to uncertainty. This analysis must include an evaluation of the consequences of predictable future events, including, but not limited to, earthquakes, floods, severe storm events, droughts or other natural phenomena.

(c) Each petition referred to in paragraph (a) of this section must include the following:
  (1) A monitoring plan that describes the monitoring program installed at and/or around the unit to verify continued compliance with the conditions of the variance. This monitoring plan must provide information on the monitoring of the unit and/or the environment around the unit. The following specific information must be included in the plan:
    (i) The media monitored in the cases where monitoring of the environment around the unit is required;
    (ii) The type of monitoring conducted at the unit, in the cases where monitoring of the unit is required;
    (iii) The location of the monitoring stations;
    (iv) The monitoring interval (frequency of monitoring at each station);
    (v) The specific hazardous constituents to be monitored;
    (vi) The implementation schedule for the monitoring program;
    (vii) The equipment used at the monitoring stations;
    (viii) The sampling and analytical techniques employed; and
    (ix) The data recording/reporting procedures.
  (2) Where applicable, the monitoring program described in paragraph (c)(1) of this section must be in place for a period of time specified by the Administrator, as part of his approval of the petition, prior to receipt of prohibited waste at the unit.
  (3) The monitoring data collected according to the monitoring plan specified under paragraph (c)(1) of this section must be sent to the Administrator according to a format and schedule specified and approved in the monitoring plan, and
  (4) A copy of the monitoring data collected under the monitoring plan specified under paragraph (c)(1) of this section must be kept on-site at the facility in the operating record.
  (5) The monitoring program specified under paragraph (c)(1) of this section meet the following criteria:

(i) All sampling, testing, and analytical data must be approved by the Administrator and must provide data that is accurate and reproducible.
(ii) All estimation and monitoring techniques must be approved by the Administrator.
(iii) A quality assurance and quality control plan addressing all aspects of the monitoring program must be provided to and approved by the Administrator.

(d) Each petition must be submitted to the Administrator.

(e) After a petition has been approved, the owner or 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 units as follows:
(1) If the owner or operator plans to make changes to the unit design, construction, or operation, such a change must be proposed, in writing, and the owner or operator must submit a demonstration to the Administrator at least 30 days prior to making the change. The Administrator will determine whether the proposed change invalidates the terms of the petition and will determine the appropriate response. Any change must be approved by the Administrator prior to being made.
(2) If the owner or operator discovers that a condition at the site which was modeled or predicted in the petition does not occur as predicted, this change must be reported, in writing, to the Administrator within 10 days of discovering the change. The Administrator will determine whether the reported change from the terms of the petition requires further action, which may include termination of waste acceptance and revocation of the petition, petition modifications, or other responses.

(f) If the owner or operator determines that there is migration of hazardous constituent(s) from the unit, the owner or operator must:
(1) Immediately suspend receipt of prohibited waste at the unit, and
(2) Notify the Administrator, in writing, within 10 days of the determination that a release has occurred.
(3) Following receipt of the notification the Administrator will determine, within 60 days of receiving notification, whether the owner or operator can continue to receive prohibited waste in the unit and whether the variance is to be revoked. The Administrator shall also determine whether further examination of any migration is warranted under applicable provisions of Part 264 or Part 265.

(g) Each petition must include the following statement signed by the petitioner or an authorized representative:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(h) After receiving a petition, the Administrator may request any additional information that reasonably may be required to evaluate the demonstration.

(i) If approved, the petition will apply to land disposal of the specific restricted waste at the individual disposal unit described in the demonstration and will not apply to any other restricted waste at that disposal unit, or to that specific restricted waste at any other disposal unit.

(j) The Administrator will give public notice in the Federal Register of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a petition will 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 if the disposal unit is operating under an RCRA permit, or up to a maximum of 10 years from the date of approval provided under paragraph (g) of this section if the unit is operating under interim status. In either case, the term of the granted petition shall expire upon the termination or denial of an RCRA permit, or upon the termination of interim status or when the volume limit of waste to be land disposed during the term of petition is reached.

(l) Prior to the Administrator's decision, the applicant is required to comply with all restrictions on land disposal under this part, once the effective date for the waste has been reached.

(m) The petition granted by the Administrator does not relieve the petitioner of his responsibilities in the management of hazardous waste under 40 CFR Part 260 through Part 271.

(n) Liquid hazardous wastes containing polychlorinated byphenyls at concentrations greater than or equal to 500 ppm are not eligible for an exemption under this section.

268.7 Waste analysis and recordkeeping.

(a) Except as specified in Section 268.32, if a generator's waste is listed in 40 CFR Part 261, Subpart D, the generator must test his waste, or test an extract using the test method 1311 (the Toxicity Characteristic Leaching Procedure, described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 as incorporated by reference in Section 260.11 of this chapter), or use knowledge of the waste, to determine if the waste is restricted from land disposal under this part. Except as specified in Section 268.32, if a generator's waste exhibits one or more of the characteristics set out at 40 CFR part 261, subpart C, the generator must test an extract using test method 1311 (the Toxicity Characteristic Leaching Procedure, described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846)), or use knowledge of the waste, to determine if the waste is restricted from land disposal under this Part. If the generator determines that his waste exhibits the characteristic of ignitability (D001) (and is not in the High TOC Ignitable Liquids Subcategory or is not treated by CMBST or RORGS of Section 268.42, Table 1), and/or the characteristic of corrosivity (D002), and/or reactivity (D003), and/or the characteristic of organic toxicity (D012-D043), and is prohibited under Section 268.37, 268.38, and 268.39, the generator must determine the underlying hazardous constituents (as defined in Section 268.2), in the D001, D002, or D012-D043 wastes.

(1) If a generator determines that he is managing a restricted waste under this part and the waste does not meet the applicable treatment standards set forth in Subpart D of this part or it exceeds the applicable prohibition levels set forth in Section 268.32 or RCRA section 3004(d), with each shipment of waste the generator must notify the treatment or storage facility in writing. The notice must include the following information:

(i) EPA Hazardous Waste Number;

(ii) The waste constituents that the treater will monitor, if monitoring will not include all regulated constituents for wastes F001-F005, F039, D001, D002, D003, and D012-D043. Generators must also include whether the waste is a nonwastewater or wastewater (as defined in Section 268.2(d) and (f), and indicate the subcategory of the waste (such as "D003 reactive cyanide"), if applicable;

(iii) The manifest number associated with the shipment of waste;

(iv) For hazardous debris, the contaminants subject to treatment as provided by Section 268.45(b) and the following statement: "This hazardous debris is subject to the alternative treatment standards of 40 CFR 268.45,"

(A) The contaminants subject to treatment, as described in Section 268.45(b); and

(B) An indication that these contaminants are being treated to comply with Section 268.45.

(v) The waste analysis data, where available; and,

(vi) The date the waste is subject to the prohibitions.

(2) If a generator determines that he is managing a restricted waste under this Part, and determines that the waste can be land disposed without further treatment, with each shipment of waste he must submit, to the treatment, storage, or land disposal facility, a notice and a certification stating that the waste meets the applicable treatment standards set forth in subpart D of this part and the applicable prohibition levels set forth in Section 268.32 or RCRA section 3004(d). Generators of hazardous debris that is excluded from the definition of hazardous waste under Section 261.3(e)(2) of this chapter (i.e., debris that the Director has determined does not contain hazardous waste), however, are not subject to these notification and certification requirements.

(i) The notice must include the following information:

(A) EPA Hazardous Waste Number;

(B) The waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for wastes F001-F005, F039, D001, D002, D003 and D012-D043. Generators must also include whether the waste is a nonwastewater or wastewater (as defined in Section 268.2 (d) and (f)), and indicate the subcategory of the waste (such as "D003 reactive cyanide"), if applicable;

(C) The manifest number associated with the shipment of waste;

(D) Waste analysis data, where available.

(ii) The certification must be signed by an authorized representative and must state the following:

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA section 3004(d). I believe that the information I submitted is true, accurate and complete. I am

aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

(3) If a generator's waste is subject to an exemption from a prohibition on the type of land disposal method utilized for the waste (such as, but not limited to, a case-by-case extension under Section 268.5, an exemption under Section 268.6, or a nationwide capacity variance under subpart C of this part), with each shipment of waste he must submit a notice to the facility receiving his waste stating that the waste is not prohibited from land disposal. The notice must include the following information:

(i) EPA Hazardous Waste Number;

(ii) The waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for wastes (F001-F005, F039, D001, D002, D003, and D012-D043. Generators must also include whether the waste is a nonwastewater or wastewater (as defined in Section 268.2(d) and (f)), and indicate the subcategory of the waste (such as "D003 reactive cyanide"), if applicable;

(iii) The manifest number associated with the shipment of waste;

(iv) Waste analysis data, where available;

(v) For hazardous debris when using the alternative treatment technologies provided by Section 268.45;

(A) The contaminants subject to treatment, as described in Section 268.45(b); and

(B) An indication that these contaminants are being treated to comply with Section 268.45.

(vi) For hazardous debris when using the treatment standards for the contaminating waste(s) in Section 268.40: the requirements described in paragraphs (a)(3) (i), (ii), (iii), (iv), and (vii) of this section; and

(vii) The date the waste is subject to the prohibitions.

(4) If a generator is managing prohibited waste in tanks, containers, or containment buildings regulated under 40 CFR 262.34, and is treating such waste in such tanks, containers, or containment buildings to meet applicable treatment standards under subpart D of this part, the generator must develop and follow a written waste analysis plan which describes the procedures the generator will carry out to comply with the treatment standards. (Generators treating hazardous debris under the alternative treatment standards of Table 1, Section 268.45, however, are not subject to these waste analysis requirements.) The plan must be kept on site in the generator's records, and the following requirements must be met;

(i) The waste analysis plan must be based on a detailed chemical and physical analysis of a representative sample of the prohibited waste(s) being treated, and contain all information necessary to treat the waste(s) in accordance with the requirements of this Part, including the selected testing frequency.

(ii) Such plan must be filed with the EPA Regional Administrator (or his designated representative) or State authorized to implement Part 268 requirements a minimum of 30 days prior to the treatment activity, with delivery verified.

(iii) Wastes shipped off-site pursuant to this paragraph must comply with the notification requirements of Section 268.7(a)(2).

(5) If a generator determines whether the waste is restricted based solely on his knowledge of the waste, all supporting data used to make this determination must be retained on-site in the generator's files. If a generator determines whether the waste is restricted based on testing this waste or an extract developed using the test method described in Appendix I of this part, all waste analysis data must be retained on-site in the generator's files.

(6) If a 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 40 CFR 261.2 through 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 RCRA Subtitle C regulation, and the disposition of the waste, in the facility's file.

(7) Generators must retain on-site a copy of all notices, certifications, demonstrations, waste analysis data, and other documentation produced pursuant to this section for at least five years from the date that the waste that is the subject of such documentation was last sent to on-site or off-site treatment, storage, or disposal. The five year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator. The requirements of this paragraph apply to solid wastes even when the hazardous characteristic is removed prior to disposal, or when the waste is excluded from the definition of hazardous or solid waste under 40 CFR 261.2 through 261.6, or exempted from RCRA Subtitle C regulation, subsequent to the point of generation.

(8) If a generator is managing a lab pack that contains none of the wastes specified in appendix IV of part 268, and wishes to use the alternative treatment standard under Section 268.42(c), with each shipment of waste the generator must submit a notice to the treatment facility in accordance with paragraph (a)(1) of this section, except that underlying hazardous constituents need not be determined. The generator must also comply with the requirements in paragraphs (a)(5) and (a)(6) of this section and must submit the following certification, which must be signed by an authorized representative.

I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack does not contain any wastes identified at Appendix IV to part 268. I am aware that there are significant penalties for submitting a false certification including possibility of fine or imprisonment.

(9) (Reserved)

(10) Small quantity generators with tolling agreements pursuant to 40 CFR 262.20(e) must comply with the applicable notification and certification requirements of paragraph (a) of this section for the initial shipment of the waste subject to the agreement. Such generators must retain on-site a copy of the notification and certification, together with the tolling agreement, for at least three years after termination or expiration of the agreement. The three-year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

(b) Treatment facilities must test their wastes according to the frequency specified in their waste analysis plans as required by Section 264.13 or Section 265.13. Such testing must be performed as provided in paragraphs (b)(1), (b)(2) and (b)(3) of this section.

(1) For wastes with treatment standards expressed as concentrations in the waste extract (Section 268.41), the owner or operator of the treatment facility must test the treatment residues, or an extract of such residues developed using the test method described in Appendix I of this part, to assure that the treatment residues or extract meet the applicable treatment standards.

(2) For wastes that are prohibited under Section 268.32 of this part or RCRA Section 3004(d) but not subject to any treatment standards under Subpart D of this part, the owner or operator of the treatment facility must test the treatment residues according to the generator testing requirements specified in Section 268.32 to assure that the treatment residues comply with the applicable prohibitions.

(3) For wastes with treatment standards expressed as concentrations in the waste (Section 268.43), the owner or operator of the treatment facility must test the treatment residues (not an extract of such residues) to assure that the treatment residues meet the applicable treatment standards.

(4) A notice must be sent with each waste shipment to the land disposal facility which includes the following information, except that debris excluded from the definition of hazardous waste under Section 261.3(e) of this chapter (i.e., debris treated by an extraction or destruction technology provided by Table 1, Section 268.45, and debris that the Director has determined does not contain hazardous waste) is subject to the notification and certification requirements of paragraph (d) of this section rather than these notification requirements:

(i) EPA Hazardous Waste Number;

(ii) The waste constituents to be monitored, if monitoring will not include all regulated constituents, for wastes F001-F005, F039, D001, D002, D003, and D012-D043. Generators must also include whether the waste is a nonwastewater or wastewater (as defined in Section 268.2 (d) and (f), and indicate the subcategory of the waste (such as D003 reactive cyanide), if applicable;

(iii) The manifest number associated with the shipment of waste; and

(iv) Waste analysis data, where available.

(5) The treatment facility must submit a certification with each shipment of waste or treatment residue of a restricted waste to the land disposal facility stating that the waste or treatment residue has been treated in compliance with the applicable performance standards specified in Subpart D of this part and the applicable prohibitions set forth in Section 268.32 or RCRA Section 3004(d). Debris excluded from the definition of hazardous waste under Section 261.3(e) of this chapter (i.e., debris treated by an extraction or destruction technology provided by Table 1, Section 268.45, and debris that the Director has determined does not contain hazardous waste), however, is subject to the notification and certification requirements of paragraph (d) of this section rather than the certification requirements of this paragraph (b)(5).

(i) For wastes with treatment standards expressed as concentrations in the waste extract or in the waste (Sections 268.41 or 268.43), or for wastes prohibited under Section 268.32 of this part

or RCRA Section 3004(d) which are not subject to any treatment standards under Subpart D of this part, the certification must be signed by an authorized representative and must state the following:

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the performance levels specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Section 3004(d) without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(ii) For wastes with treatment standards expressed as technologies (Section 268.42), the certification must be signed by an authorized representative and must state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.42. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(iii) For wastes with treatment standards expressed as concentrations in the waste pursuant to Section 268.43, if compliance with the treatment standards in subpart D of this part is based in part or in whole on the analytical detection limit alternative specified in Section 268.43(c), the certification also must state the following:

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by incineration in units operated in accordance with 40 CFR part 264, subpart O) or 40 CFR part 265, subpart O, or by combustion in fuel substitution units operating in accordance with applicable technical requirements, and I have been unable to detect the nonwastewater organic constituents despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(iv) For characteristic wastes D001, D002, D003, and D012-D043 that are: subject to the treatment standards in Section 268.40 (other than those expressed as a required method of treatment); that are reasonably expected to contain underlying hazardous constituents as defined in Section 268.2(i); are treated on-site to remove the hazardous characteristic; and are then sent off-site for treatment of underlying hazardous constituents, the certification must state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(v) For characteristic wastes D001, D002, D003 and D012-D043 that contain underlying hazardous constituents as defined in Section 268.2(I) that are treated on-site to remove the hazardous characteristic and to treat underlying hazardous constituents to levels in Section 268.48 Universal Treatment Standards, the certification must state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic, and that underlying hazardous constituents as defined in Section 268.2 have been treated on-site to meet the Section 268.48 Universal Treatment Standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(6) If the waste or treatment residue will be further managed at a different treatment or storage facility, the treatment, storage or disposal facility sending the waste or treatment residue off-site must comply with the notice and certification requirements applicable to generators under this section.

(7) Where the wastes are recyclable materials used in a manner constituting disposal subject to the provisions of Section 266.20(b) regarding treatment standards and prohibition levels, the owner or operator of a treatment facility (i.e., the recycler) is not required to notify the receiving facility, pursuant to paragraph (b)(4) of this section.

(c) Except where the owner or 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 or operator of any land disposal facility disposing any waste subject to restrictions under this part must:

(1) Have copies of the notice and certifications specified in paragraph (a) or (b) of this section, and the certification specified in Section 268.8 if applicable.

(2) Test the waste, or an extract of the waste or treatment residue developed using the test method described in Appendix I of this part or using any methods required by generators under Section 268.32 of this part, to assure that the wastes or treatment residues are in compliance with the applicable treatment standards set forth in Subpart D of this part and all applicable prohibitions set forth in Section 268.32 of this part or in RCRA section 3004(d). Such testing must be performed according to the frequency specified in the facility's waste analysis plan as required by Section 264.13 or Section 265.13.

(d) Generators or treaters who first claim that hazardous debris is excluded from the definition of hazardous waste under Section 261.3(e) of this chapter (i.e., debris treated by an extraction or destruction technology provided by Table 1, Section 268.45, and debris that the EPA Regional Administrator (or his designated representative) or State authorized to implement part 268 requirements has determined does not contain hazardous waste) are subject to the following notification and certification requirements:

(1) A one-time notification, including the following information, must be submitted to the EPA Regional hazardous waste management division director (or his designated representative) or State authorized to implement part 268 requirements.

(i) The name and address of the Subtitle D facility receiving the treated debris;

(ii) A description of the hazardous debris as initially generated, including the applicable EPA Hazardous Waste Number(s); and

(iii) For debris excluded under Section 261.3(e)(1) of this chapter, the technology from Table 1, Section 268.45, used to treat the debris.

(2) The notification must be updated if the debris is shipped to a different facility, and, for debris excluded under Section 261.2(e)(1) of this chapter, if a different type of debris is treated or if a different technology is used to treat the debris.

(3) For debris excluded under Section 261.3(e)(1) of this chapter, the owner or operator of the treatment facility must document and certify compliance with the treatment standards of Table 1, Section 268.45, as follows:

(i) Records must be kept of all inspections, evaluations, and analyses of treated debris that are made to determine compliance with the treatment standards;

(ii) Records must be kept of any data or information the treater obtains during treatment of the debris that identifies key operating parameters of the treatment unit; and

(iii) For each shipment of treated debris, a certification of compliance with the treatment standards must be signed by an authorized representative and placed in the facility's files. The certification must state the following: "I certify under penalty of law that the debris has been treated in accordance with the requirements of 40 CFR 268.45. I am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment."

268.8 Removed and Reserved:

268.9 Special rules regarding wastes that exhibit a characteristic.

(a) The initial generator of a solid waste must determine each EPA Hazardous Waste Number (waste code) applicable to the waste in order to determine the applicable treatment standards under subpart D of this part. For purposes of part 268, the waste will carry the waste code for any applicable listing under 40 CFR 261, subpart D. In addition, the waste will carry one or more of the waste codes under 40 CFR 261, subpart C, where the waste exhibits a characteristic, except in the case when the treatment standard for the waste listed in part 261, subpart D operates in lieu of the standard for the waste code under 40 CFR part 261, subpart

C, as specified in paragraph (b) of this section. If the generator determines that his waste displays a hazardous characteristic (and the waste is not a D004--D011 waste, High TOC D001, or is not treated by CMBST, or RORGS of Section 268.42. Table 1), the generator must determine what underlying hazardous constituents as defined in Section 268.2), are reasonably expected to be present above the universal treatment standards found in Section 268.48.

(b) Where a prohibited waste is both listed under 40 CFR part 261, subpart D and exhibits a characteristic under 40 CFR part 261, subpart C, the treatment standard for the waste code listed in 40 CFR part 261, subpart D will operate in lieu of the standard for the waste code under 40 CFR part 261, subpart C, 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 from the initial point of generation, no prohibited waste which exhibits a characteristic under 40 CFR part 261, Subpart C may be land disposed unless the waste complies with the treatment standards under Subpart D of this part.

(d) Wastes that exhibit a characteristic are also subject to Section 268.7 requirements, except that once the waste is no longer hazardous, a one-time notification and certification must be placed in the generators or treaters files and sent to the EPA region or authorized state, except for those facilities discussed in paragraph (f) of this section. The notification and certification that is placed in the generators or treaters files must be updated if the process or operation generating the waste changes and/or if the Subtitle D facility receiving the waste changes. However, the generator or treater need only notify the EPA region or an authorized state on an annual basis if such changes occur. Such notification and certification should be sent to the EPA region or authorized state by the end of the calendar year, but no later than December 31.

(1) The notification must include the following information:

(i) For characteristic wastes other than those managed on site in a wastewater treatment system subject to the Clean Water Act (CWA), zero-dischargers engaged in CWA-equivalent treatment, or Class I nonhazardous injection wells, the name and address Subtitle D facility receiving the waste shipment; and

(ii) For all characteristic wastes, a description of the waste as initially generated, including the applicable EPA Hazardous Waste Number(s) and treatability group(s), and underlying hazardous constituents.

(2) The certification must be signed by an authorized representative and must state the language found in Section 268.7(b)(5).

(i) If treatment removes the characteristic but does not treat underlying hazardous constituents, then the certification found in Section 268.7 (b)(5)(iv) applies.

(ii) (Reserved)

(3) For characteristic wastes whose ultimate disposal will be into a Class I nonhazardous injection well, and compliance with the treatment standards found in Section 268.48 for underlying hazardous constituents is achieved through pollution prevention that meets the criteria set out at 40 CFR 148.1(d), the following information must also be included:

(i) A description of the pollution prevention mechanism and when it was implemented if already complete;

(ii) The mass of each underlying hazardous constituent before pollution prevention;

(iii) The mass of each underlying hazardous constituent that must be removed, adjusted to reflect variations in mass due to normal operating conditions; and

(iv) the mass reduction of each underlying hazardous constituent that is achieved.

(e) For decharacterized wastes managed on-site in a wastewater treatment system subject to the Clean Water Act (CWA or zero-dischargers engaged in CWA-equivalent treatment, compliance with the treatment standards found at Section 268.48 must be monitored quarterly, unless the treatment is aggressive biological treatment, in which case compliance must be monitored annually. Monitoring results must be kept in on-site files for 5 years.

(f) For decharacterized wastes managed on-site in a wastewater treatment system subject to the Clean Water Act (CWA) for which all underlying hazardous constituents (as defined in Section 268.2), are addressed by a CWA permit, this compliance must be documented and this documentation must be kept in on-site files.

(g) For characteristic wastes whose ultimate disposal will be into a Class I non-hazardous injection well which qualifies for the deminimis exclusion described in Section 268.1, information supporting that qualification must be kept in on-site files.

268.10 -268.12 (Removed and Reserved)

268.13 Schedule for wastes identified or listed after November 8, 1984.

In the case of any hazardous waste identified or listed under section 3001 after November 8, 1984, the Administrator shall make a land disposal prohibition determination within 6 months after the date of identification or listing.

268.14 Surface Impoundment Exemptions.

(a) This section defines additional circumstances under which an otherwise prohibited waste may continue to be placed in a surface impoundment.

(b) Wastes which are newly identified or listed under section 3001 after November 8, 1984, and stored in a surface impoundment that is newly subject to subtitle C of RCRA as a result of the additional identification or listing may continue to be stored in the surface impoundment for 48 months after the promulgation of the additional listing or characteristic, not withstanding that the waste is otherwise prohibited from land disposal, provided that the surface impoundment is in compliance with the requirements of subpart F of part 265 of this chapter within 12 months after promulgation of the new listing or characteristic.

(c) Wastes which are newly identified or listed under section 3001 after November 8, 1984, and treated in a surface impoundment that is newly subject to subtitle C of RCRA as a result of the additional identification or listing, may continue to be treated in that surface impoundment, not withstanding that the waste is otherwise prohibited from land disposal, provided that surface impoundment is in compliance with the requirements of subpart F of part 265 of this chapter within 12 months after the promulgation of the new listing or characteristic. In addition, if the surface impoundment continues to treat hazardous waste after 48 months from promulgation of the additional listing or characteristic, it must then be in compliance with Section 268.4.

(b) 40 CFR 268.30 through 268.38 (Subpart C), "Prohibitions on Land Disposal", are incorporated by reference including subsequent amendments and editions.

SUBPART C - PROHIBITIONS ON LAND DISPOSAL

268.30 Waste specific prohibitions -- Solvent wastes.

(a) Effective November 8, 1986, the spent solvent wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Nos. F001, F002, F003, F004 and F005, are prohibited under this part from land disposal (except in an injection well) unless one or more of the following conditions apply:
  (1) The generator of the solvent waste is a small quantity generator of 100-1000 kilograms of hazardous waste per month; or
  (2) The solvent waste is generated from any response action taken under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) or any corrective action taken under the Resource Conservation and Recovery Act (RCRA), except where the waste is contaminated soil or debris; or
  (3) The initial generator's solvent waste is a solventwater mixture, solvent-containing sludge or solid, or solvent contaminated soil (non-CERCLA or RCRA corrective action) containing less than 1 percent total F001-F005 solvent constituents listed in Table CCWE of Section 268.41 of this part; or
  (4) The solvent waste is a residue from treating a waste described in paragraphs (a)(1), (a)(2), or (a)(3) of this section; or the solvent waste is a residue from treating a waste not described in paragraphs (a)(1), (a)(2), or (a)(3) of this section provided such residue belongs to a different treatability group than the waste as initially generated and wastes belonging to such a treatability group are described in paragraph (a)(3) of this section.

(b) Effective November 8, 1988, the F001-F005 solvent wastes listed in paragraphs (a)(1), (2), (3) or (4) of this section are prohibited from land disposal.

(c) Effective November 8, 1990, the F001-F005 solvent wastes which are contaminated soil and debris resulting from a response action taken under section 104 or 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) or a corrective action required under subtitle C of the Resource Conservation and Recovery Act (RCRA) and the residues from treating these wastes are prohibited from land disposal. Between November 8, 1988, and November 8, 1990, these wastes may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 268.5(h)(2).

(d) The requirements of paragraphs (a), (b), and (c) of this section do not apply if:
  (1) The wastes meet the standards of Subpart D of this part; or
  (2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 268.6, with respect to those wastes and units covered by the petition; or
  (3) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 268.5, with respect to those wastes and units covered by the extension.

268.31 Waste specific prohibitions -- Dioxin-containing wastes.

(a) Effective November 8, 1988, the dioxin-containing wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, F027 and F028 are prohibited from land disposal unless the following condition applies:
  (1) The F020-F023 and F026-F028 dioxin-containing waste is contaminated soil and debris resulting from a response action taken under section 104 or 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) or a corrective action taken under subtitle C of the Resource Conservation and Recovery Act (RCRA).

(b) Effective November 8, 1990, the F020-F023 and F026-F028 dioxin-containing wastes listed in paragraph (a)(1) of this section are prohibited from land disposal.

(c) Between November 8, 1986 and November 8, 1988, wastes included in paragraph (a)(1) of this section may be disposed of in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 268.5(h)(2) and all other applicable requirements of Parts 264 and 265 of this chapter.

(d) The requirements of paragraphs (a) and (b) of this section do not apply if:
  (1) The wastes meet the standards of Subpart D of this part; or

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 268.6, with respect to those wastes and units covered by the petition; or
(3) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 268.5, with respect to those wastes covered by the extension.

268.32 Waste specific prohibitions -- California list wastes.

(a) Effective July 8, 1987, the following hazardous wastes are prohibited from land disposal (except in injection wells):
(1) Liquid hazardous wastes having a pH less than or equal to two (2.0);
(2) Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 ppm;
(3) Liquid hazardous wastes that are primarily water and contain halogenated organic compounds (HOCs) in total concentration greater than or equal to 1,000 mg/l and less than 10,000 mg/l HOCs.
(b) [Reserved]
(c) [Reserved]
(d) The requirements of paragraph (a) and (e) of this section do not apply until:
(1) July 8, 1989 where the wastes are contaminated soil or debris not resulting from a response action taken under Section 104 or 106 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or a corrective action taken under Subtitle C of the Resource Conservation and Recovery Act (RCRA). Between July 8, 1987 and July 8, 1989, the wastes may be disposed in a landfill or surface impoundment only if such disposal is in compliance with the requirements specified in Section 268.5(h)(2).
(2) November 8, 1990 where the wastes are contaminated soil or debris resulting from a response action taken under section 104 or 106 of CERCLA or a corrective action taken under Subtitle C of RCRA. Between November 8, 1988, and November 8, 1990, the wastes may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 268.5(h)(2).
(e) Effective November 8, 1988, the following hazardous wastes are prohibited from land disposal (subject to any regulations that may be promulgated with respect to disposal in injection wells):
(1) Liquid hazardous wastes that contain HOCs in total concentration greater than or equal to 1,000 mg/l and are not prohibited under paragraph (a)(3) of this section; and
(2) Nonliquid hazardous wastes containing HOCs in total concentration greater than or equal to 1,000 mg/kg and are not wastes described in paragraph (d) of this section.
(f) Between July 8, 1987 and November 8, 1988, the wastes included in paragraphs (e)(1) and (e)(2) of this section may be disposed of in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 268.5(h)(2).
(g) The requirements of paragraphs (a), (d), and (e) of this section do not apply if:
(1) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 268.6, with respect to those wastes and units covered by the petition (except for liquid hazardous wastes containing polychlorinated biphenyls at concentrations greater than or equal to 500 ppm which are not eligible for such exemptions); or
(2) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 268.5, with respect to those wastes covered by the extension; or
(3) The wastes meet the applicable standards specified in Subpart D of this part or, where treatment standards are not specified, the wastes are in compliance with the applicable prohibitions set forth in this section or RCRA Section 3004(d).
(h) The prohibitions and effective dates specified in paragraphs (a)(3), (d) and (e) of this section do not apply where the waste is subject to a Part 268 Subpart C prohibition and effective date for a specified HOC [such as a hazardous waste chlorinated solvent, see e.g., Section 268.30(a)].
(i) To determine whether or not a waste is a liquid under paragraphs (a) and (e) of this section and under RCRA Section 3004(d), the following test must be used: Method 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," EPA Publication No. SW-846. (Incorporated by reference, see Section 260.11(a) of this chapter.)
(j) Except as otherwise provided in this paragraph, the waste analysis and recordkeeping requirements of Section 268.7 are applicable to wastes prohibited under this part or RCRA Section 3004(d):
(1) The initial generator of a liquid hazardous waste must test his waste (not an extract or filtrate) in accordance with the procedures specified in Section 261.22(a)(1), or use knowledge of the waste to determine if the waste has a pH less than or equal to two (2.0). If the liquid waste has a pH less than

or equal to two (2.0), it is restricted from land disposal and all requirements of Part 268 are applicable, except as otherwise specified in this section.

(2) The initial generator of either a liquid hazardous waste containing polychlorinated byphenyls (PCBs) or a liquid or nonliquid hazardous waste containing halogenated organic compounds (HOCs) must test his waste (not an extract or filtrate), or use knowledge of the waste to determine whether the concentration levels in the waste equal or exceed the prohibition levels specified in this section. If the concentration of PCBs or HOCs in the waste is greater than or equal to the prohibition levels specified in this section, the waste is restricted from land disposal and all requirements of Part 268 are applicable, except as otherwise specified in this section.

268.33 Waste specific prohibitions--First Third Wastes

(a) Effective August 8, 1988, the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Nos. F006 (nonwastewater), K001, K004 wastes specified in Section 268.43(a), K008 wastes specified in Section 268.43(a), K016, K018, K019, K020, K021 wastes specified in Section 268.43(a), K022 (nonwastewater), K024, K025 nonwastewaters specified in Section 268.43(a), K030, K036 (nonwastewater), K037, K044, K045, nonexplosive K046 (nonwastewater), K047, K060 (nonwastewater), K061 (nonwastewaters containing less than 15% zinc), K062, non $CaSO_4$ K069 (nonwastewaters), K086 (solvent washes), K087, K099, K100 nonwastewaters specified in Section 268.43(a), K101 (wastewater), K101 (nonwastewater, low arsenic subcategory--less than 1% total arsenic), K102 (wastewater), K102 (nonwastewater, low arsenic subcategory--less than 1% total arsenic), K103, and K104 are prohibited from land disposal (except in an injection well).

(1) Effective August 8, 1988 and continuing until August 7, 1990, K061 wastes containing 15% zinc or greater are prohibited from land disposal pursuant to the treatment standards specified in Section 268.41 applicable to K061 wastes that contain less than 15% zinc.

(b) Effective August 8, 1990, the waste specified in 40 CFR 261.32 as EPA Hazardous Waste Nos. K071 is prohibited from land disposal.

(c) Effective August 8, 1990, the wastes specified in 40 CFR 268.10 having a treatment standard in Subpart D of this part based on incineration and which are contaminated soil and debris are prohibited from land disposal.

(d) Between November 8, 1988 and August 8, 1990, wastes included in paragraphs (b) and (c) of this section may be disposed of in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 268.5(h)(2).

(e) The requirements of paragraphs (a), (b), (c), and (d) of this section do not apply if:

(1) The wastes meet the applicable standards specified in Subpart D of this Part; or

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 268.6, with respect to those wastes and units covered by the petition; or

(3) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 268.5, with respect to those wastes covered by the extension.

(f) Between August 8, 1988, and May 8, 1990, the wastes specified in Section 268.10 for which treatment standards under Subpart D of this Part have not been promulgated, including those wastes which are subject to the Statutory prohibitions of RCRA section 3004(d) or codified prohibitions under Section 268.32 of this Part, but not including wastes subject to a treatment standard under Section 268.42 of this Part, are prohibited from disposal in a landfill or surface impoundment unless a demonstration and certification have been submitted pursuant to 268.8.

(g) To determine whether a hazardous waste listed in Section 268.10 exceeds the applicable treatment standards specified in Section 268.41 and Section 268.43, the initial generator must test a representative sample of the waste extract or the entire waste depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Subpart D levels, the waste is prohibited from land disposal and all requirements of Part 268 are applicable, except as otherwise specified.

268.34 Waste specific prohibitions--second third wastes.

(a) Effective June 8, 1989, the following wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Nos. F010; F024; the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Nos. K005, K007; K009 (nonwastewaters), K010; K023; K027; K028; K029 (nonwastewaters); K036; (wastewaters); K038; K039; K040; K043; K093; K094; K095 (nonwastewaters); K096 (nonwastewaters); K113; K114; K115; K116; and

the wastes specified in 40 CFR 261.33 as EPA Hazardous Waste Nos. P013; P021; P029; P030; P039; P040; P041; P043; P044; P062; P063; P071; P074; P085; P089; P094; P097; P098; P099; P104; P106; P109; P111; P121; U028; U058; U069; U087; U088; U102; U107; U221; U223; and U235 are prohibited from land disposal.

(b) Effective June 8, 1989, the following wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Nos. K009 (wastewaters), K011 (nonwastewaters), K013 (nonwastewaters), and K014 (nonwastewaters) are prohibited from land disposal except when they are underground injected pursuant to 40 CFR 148.14(f) and Section 148.15(d).

(c) Effective July 8, 1989, the wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Nos. F006 - cyanide (nonwastewater); F008; F009; F011 (wastewaters) and F012 (wastewaters) are prohibited from land disposal.

(1) Effective July 8, 1989, the following waste specified in 40 CFR 261.31 as EPA Hazardous Waste No. F007 is prohibited from land disposal except when it is underground injected pursuant to 40 CFR 148.14(f).

(d) Effective June 8, 1991, the wastes specified in this section having a treatment standard in Subpart D of this part based on incineration, and which are contaminated soil and debris are prohibited from land disposal.

(e) Between June 8, 1989 and June 8, 1991, (for wastes F007, F008, F009, F011,and F012 between June 8, 1989 and July 8, 1989) wastes included in paragraphs (c) and (d) of this section may be disposed in a landfill or surface impoundment, regardless whether such unit is a new, replacement, or lateral expansion unit, only if such unit is in compliance with the technical requirements specified in Section 268.5(h)(2).

(f) The requirements of paragraphs (a), (b), (c), and (d) of this section do not apply if:

(1) The wastes meet the applicable standards specified in Subpart D of this Part; or

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 268.6, with respect those wastes and units covered by the extension.

(g) The requirements of paragraphs (a), (b), and (c) of this section do not apply if persons have been granted an extension to the effective date of a prohibition pursuant to Section 268.5, with respect to those wastes covered by the extension.

(h) Between June 8, 1989 and May 8, 1990, the wastes specified in Section 268.11 for which treatment standards under Subpart D of this Part are not applicable, including California list wastes subject to the statutory prohibitions of RCRA section 3004(d) or codified prohibitions under Section 268.32, are prohibited from disposal in a landfill or surface impoundment unless the wastes are the subject of a valid demonstration and certification pursuant to Section 268.8.

(i) To determine whether a hazardous waste listed in Section 268.10, Section 268.11, and Section 268.12 exceeds the applicable treatment standards specified in Section 268.41 and Section 268.43, the initial generator must test a representative sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Subpart D levels, the waste is prohibited from land disposal and all requirements of Part 268 are applicable, except as otherwise specified.

268.35 Waste specific prohibitions--Third Third wastes.

(a) Effective August 8, 1990, the following wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Numbers F002 (1,1,2-trichloroethane), F005 (benzene), F005 (2-ethoxy ethanol) F005 (2-nitropropane). F006 (wastewaters), F019, F025, and F039 (wastewaters); the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Numbers K002; K003; K004 (wastewaters); K005 (wastewaters); K006; K008 (wastewaters); K011 (wastewaters); K013 (wastewaters), K014 (wastewaters); K015 (nonwastewaters); K017; K021 (wastewaters); K022 (wastewaters); K025 (wastewaters); K026; K029 (wastewaters); K031 (wastewaters); K032; K033; K034; K035; K041; K042; K046 (wastewaters), reactive nonwastewaters; K048 (wastewaters); K049 (wastewaters); K050 (wastewaters); K051 (wastewaters); K052 (wastewaters); K060 (wastewaters); K061 (wastewaters); and (high zinc subcategory > 15% zinc); K069 (wastewaters), calcium sulfate nonwastewaters); K073; K083; K084 (wastewaters); K085; K095 (wastewaters); K096 (wastewaters); K097; K098; K100 (wastewaters); K101 (wastewaters); K102 (wastewaters; K105; and K106 (wastewaters); the wastes specified in 40 CFR 261.33(e) as EPA Hazardous Waste numbers P001; P002; P003; P004; P005; P006; P007; P008; P009; P010 (wastewaters); P011 (wastewaters); P012 (wastewaters); P014; P015; P016; P017; P018 P020; P022; P023; P024; P026; P027; P028; P031; P033, P034; P036 (wastewaters); P037; P038 (wastewaters); P042; P045; P046; P047; P048; P049; P050; P051; P054; P056; P057; P058; P059; P060; P064; P065 (wastewaters); P066; P067; P068; P069; P070; P072; P073; P075; P076; P077; P078; P081; P082; P084; P088, P092 (wastewaters); P093; P095; P096; P101; P102; P103; P105; P108; P110; P112; P113; P114; P115; P116; P118, P119, P120, P122; and P123; and the wastes

specified in 40 CFR 261.33(f) as EPA Hazardous Waste Numbers U001; U002; U003; U004; U005; U006; U007; U008; U009; U010; U011; U012; U014; U015; U016; U017; U018; U019; U020; U021; U022; U023; U024; U025; U026; U027; U029; U030; U031; U032; U033; U034; U035; U036; U037; U038; U039; U041; U042; U043; U044; U045; U046; U047; U048; U049; U050; U051; U052; U053; U055; U056; U057; U059; U060; U061; U062; U063; U064; U066; U067; U068; U070; U071; U072; U073; U074; U075; U076; U077; U078; U079; U080; U081; U082; U083; U084; U085; U086; U089; U090; U091; U092; U093; U094; U095; U096; U097; U098; U099; U101; U103; U105; U106; U108; U109; U110; U111; U112; U113; U114; U115; U116; U117; U118; U119; U120 (wastewaters); U121; U122; U123; U124; U125; U126; U127; U128; U129; U130; U131; U132; U133; U134; U135; U136 (wastewaters); U137; U138; U140; U141; U142; U143; U144; U145; U146; U147; U148; U149; U150; U151 (wastewaters); U152; U153; U154; U155; U156; U157; U158; U159; U160; U161; U162; U163; U164; U165; U166; U167; U168; U169; U170; U171; U172; U173; U174; U176; U177; U178; U179; U180; U181; U182; U183; U184; U185; U186; U187; U188; U189; U191; U192; U193; U194; U196; U197; U200; U201; U202; U203; U204; U205; U206; U207; U208; U209; U210; U211; U213; U214; U215; U216; U217; U218; U219; U220; U222; U225; U226; U227; U228; U234; U236; U237; U238; U239; U240; U243; U244; U246; U247; U248; U249;
and the following wastes identified as hazardous based on a characteristic alone: D001; D002, D003, D004 (wastewaters), D005, D006; D007; D008 (except for lead materials stored before secondary smelting), D009 (wastewaters), D010, D011, D012, D013, D014, D015, D016, and D017 are prohibited from land disposal.

(b) Effective November 8, 1990, the following wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Numbers K048 (nonwastewaters), K049 (nonwastewaters), K050 (nonwastewaters), K051 (nonwastewaters), and K052 (nonwastewaters are prohibited from land disposal.

(c) Effective May 8, 1992, the following waste specified in 40 CFR 261.31 as EPA Hazardous Waste Numbers F039 (nonwastewaters); the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Number K031 (nonwastewaters); K084 (nonwastewaters); K101 (nonwastewaters); K102 (nonwastewaters); K106 (nonwastewaters); the wastes specified in 40 CFR 261.33(e) as EPA Hazardous Waste Numbers P010 (nonwastewaters); P011 (nonwastewaters); P012 (nonwastewaters); P036 (nonwastewaters); P038 (nonwastewaters); P065 (nonwastewaters); P087 and P092 (nonwastewaters); the wastes specified in 40 CFR 261.33(f) as EPA Hazardous Waste Numbers U136 (nonwastewaters); and U151 (nonwastewaters); and the following wastes identified as hazardous based on a characteristic alone: D004 (nonwastewaters); and D009 (nonwastewaters); and RCRA hazardous waste that contain naturally occurring radioactive materials are prohibited from land disposal.

(d) Effective May 8, 1992, hazardous wastes listed in 40 CFR 268.10, 268.11, and 268.12 that are mixed radioactive/hazardous wastes are prohibited from land disposal, except as provided in paragraph (e) of this section.

(e) Subject to applicable prohibitions in Sections 268.30, 268.31, and 268.32, contaminated soil and debris are prohibited from land disposal as follows:

(1) Effective May 8, 1994, debris that is contaminated with wastes listed in 40 CFR 268.12, and debris that is contaminated with any characteristic waste for which treatment standards are established in subpart D of this part, are prohibited from land disposal.

(2) Effective May 8, 1994, mixed radioactive hazardous debris that is contaminated with wastes listed in 40 CFR 268.12 and mixed radioactive hazardous debris that is contaminated with any characteristic waste for which treatment standards are established in subpart D of this part, are prohibited from land disposal.

(3) Paragraphs (e)(1) and (2) of this section shall not apply where the generator has failed to make a good-faith effort to locate treatment capacity suitable for its waste, has not utilized such capacity as it has found to be available, or has failed to file a report as required by 40 CFR 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. Where paragraphs (e)(1) and (2) of this section do not apply, all wastes described in these paragraphs are prohibited from land disposal effective May 8, 1993.

(4) Effective May 8, 1993, hazardous soil contaminated with wastes specified in this section having treatment standards in subpart D of this part based on incineration, mercury retorting or vitrification, and soils contaminated with hazardous wastes listed in 40 CFR 268.10, 268.11 and 268.12 that are mixed radioactive hazardous wastes, are prohibited from land disposal.

(5) When used in paragraphs (e)(1) and (2) of this section, debris is defined as follows:

(i) Debris as defined in 40 CFR 268.2(g); or

(ii) Nonfriable inorganic solids that are incapable of passing through a 9.5 mm standard sieve that require cutting, or crushing and grinding a mechanical sizing equipment prior to stabilization, limited to the following inorganic or metal materials:

(A) Metal slags (either dross or scoria).
(B) Glassified slag.
(C) Glass.
(D) Concrete (excluding cementitious or pozzolanic stabilized hazardous wastes).
(E) Masonry and refractory bricks.
(F) Metal cans, containers, drums, or tanks.
(G) Metal nuts, bolts, pipes, pumps, valves, appliances, or industrial equipment.
(H) Scrap metal as defined in 40 CFR 261.1(c)(6).

(f) Between May 8, 1990 and August 8, 1990, the wastes included in paragraph (a) may be disposed of in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 268.5(h)(2).

(g) Between May 8, 1990 and November 8, 1990, wastes included in paragraph (b) of this section may be disposed of in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 268.5(h)(2).

(h) Between May 8, 1990, and May 8, 1992, wastes included in paragraph (c), (d), and (e) of this section may be disposed of in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 268.5(h)(2).

(i) The requirements of paragraphs (a), (b), (c), (d), and (e) of this section do not apply if:
(1) The wastes meet the applicable standards specified in subpart D of this part;
(2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 268.6, with respect to those wastes and units covered by the petition;
(3) The wastes meet the applicable alternate standards established pursuant to a petition granted under Section 268.44;
(4) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 268.5, with respect to these wastes covered by the extension.

(j) To determine whether a hazardous waste listed in Section 268.10, 268.11, and 268.12 exceeds the applicable treatment standards specified in Sections 268.41 and 268.43, the initial generator must test a representative sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable subpart D levels, the waste is prohibited from land disposal, and all requirements of part 268 are applicable, except as otherwise specified.

(k) Effective May 8, 1993, D008 lead materials stored before secondary smelting are prohibited from land disposal. On or before March 1, 1993, the owner or operator of each secondary lead smelting facility shall submit to EPA the following: A binding contractual commitment to construct or otherwise provide capacity for storing such D008 wastes prior to smelting which complies with all applicable storage standards; documentation that the capacity to be provided will be sufficient to manage the entire quantity of such D008 wastes; and a detailed schedule for providing such capacity. Failure by a facility to submit such documentation shall render such D008 managed by that facility prohibited from land disposal effective March 1, 1993. In addition, no later than July 27, 1992 the owner or operator of each facility must place in the facility record documentation of the manner and location in which such wastes will be managed pending completion of such capacity, demonstrating that such management capacity will be adequate and complies with all applicable subtitle C requirements.

268.36 Waste Specific Prohibitions--Newly Listed Wastes.

(a) Effective November 9, 1992, the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Numbers K107, K108, K109, K110, K111, K112, K117, K118, K123, K124, K125, K126, K131, K132, and K136; and the wastes specified in 40 CFR 261.33(f) as EPA Hazardous Waste numbers U328, U353, and U359 are prohibited from land disposal.

(b) Effective June 30, 1993, the wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Numbers F037 and F038 that are not generated from surface impoundment cleanouts or closures are prohibited from land disposal.

(c) Effective June 30, 1994, the wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Numbers F037 and F038 that are generated from surface impoundment cleanouts or closures are prohibited from land disposal.

(d) Effective June 30, 1994, radioactive wastes that are mixed with hazardous wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Numbers F037 and F038; the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Numbers K107, K108, K109, K110, K111, K112, K117, K118, K123, K124, K125, K126, K131, K132, and K136; or the wastes specified in 40 CFR 261.33(f) as EPA Hazardous Waste Numbers U328, U353, and U359 are prohibited from land disposal.

(e) Effective June 30, 1994, debris contaminated with hazardous wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Numbers F037 and F038; the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Numbers K107, K108, K109, K110, K111, K112, K117, K118, K123, K124, K125, K126, K131, K132, and K136; or the wastes specified in 40 CFR 261.33(f) as EPA Hazardous Waste Numbers U328, U353, and U359; and which is not contaminated with any other waste already subject to a prohibition are prohibited from land disposal.

(f) Between June 30, 1992 and June 30, 1993, the wastes included in paragraph (b) of this section may be disposed of in a landfill, only if such unit is in compliance with the requirements specified in Section 268.5(h)(2), and may be generated in and disposed of in a surface impoundment only if such unit is in compliance with either Section 268.5(h)(2) or Section 268.14.

(g) Between June 30, 1992 and June 30, 1994, the wastes included in paragraphs (d) and (e) of this section may be disposed of in a landfill only if such unit is in compliance with the requirements specified in Section 268.5(h)(2), and may be generated in a disposed of in a surface impoundment only if such unit is in compliance with either Section 268.5(h)(2) or Section 268.14.

(h) The requirements of paragraphs (a), (b), (c), (d), and (e) of this section do not apply if:
  (1) The wastes meet the applicable standards specified in subpart D of this part;
  (2) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 268.8, with respect to those wastes and units covered by the petition;
  (3) The wastes meet the applicable alternate standards established pursuant to a petition granted under Section 268.44;
  (4) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 268.5, with respect to the wastes covered by the extension.

(i) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in Sections 268.41 and 268.43, the initial generator must test a representative sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable levels in subpart D of this part, the waste is prohibited from land disposal, and all requirements of part 268 are applicable, except as otherwise specified.

268.37 Waste specific prohibitions--Ignitable and corrosive characteristic wastes whose treatment standards were vacated.

(a) Effective August 9, 1993, the wastes specified in 40 CFR 261.21 as D001 (and is not in the High TOC Ignitable Liquids Subcategory), and specified in Section 261.22 as D002, that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies.

(b) Effective February 10, 1994, the wastes specified in 40 CFR 261.21 as D001 (and is not in the High TOC Ignitable Liquids Subcategory), and specified in Section 261.22 as D002, that are managed in systems defined in 40 CFR 144.6(e) and 146.6(e) as Class V injection wells, that do not engage in CWA-equivalent treatment before injection, are prohibited from land disposal.

268.38 Universal Treatment Standards

(a) Effective December 19, 1994, the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste numbers K141, K142, K143, K144, K145, K147, K148, K149, K150, and K151 are prohibited from land disposal. In addition, debris contaminated with EPA Hazardous Waste numbers F037, F038, K107- K112, K117, K118, K123-K126, K131, K132, K136, U328, U353, U359, and soil and debris contaminated with D012-D043, K141-K145, and K147-K151 are prohibited from land disposal. The following wastes that are specified in 40 CFR 261.24, Table 1 as EPA Hazardous Waste numbers: D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043 that are not radioactive, or that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that are zero dischargers that do not engage in CWA-equivalent treatment before ultimate land disposal, or that are injected in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or

ferrous sulfate precipitation for cyanide, precipitation/sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or better than these technologies.

(b) On September 19, 1996, radioactive wastes that are mixed with D018-D043 that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/ sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies. Radioactive wastes mixed with K141-K145, and K147-K151 are also prohibited from land disposal. In addition, soil and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.

(c) Between December 19, 1994 and September 19, 1996, the wastes included in paragraphs (b) of this section may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in §268.5(h)(2) of this Part.

(d) The requirements of paragraphs (a), (b), and (c) of this section do not apply if:
   (1) The wastes meet the applicable treatment standards specified in Subpart D of this part;
   (2) Persons have been granted an exemption from a prohibition pursuant to a petition under §268.6, with respect to those wastes and units covered by the petition;
   (3) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under §268.44;
   (4) Persons have been granted an extension to the effective date of a prohibition pursuant to §268.5, with respect to these wastes covered by the extension.

(e) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in §268.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Subpart D levels, the waste is prohibited from land disposal, and all requirements of part 268 are applicable, except as otherwise specified.

(c) 40 CFR 268.40 through 268.48 (Subpart D), "Treatment Standards", are incorporated by reference including subsequent amendments and editions.

SUBPART D - TREATMENT STANDARDS

268.40 Applicability of treatment standards.

(a) A prohibited waste identified in the table "Treatment Standards for Hazardous Wastes" may be land disposed only if it meets the requirements found in the table. For each waste, the table identifies one of three types of treatment standard requirements:
  (1) All hazardous constituents in the waste or in the treatment residue must be at or below the values found in the table for that waste ("total waste standards"); or
  (2) The hazardous constituents in the extract of the waste or in the extract of the treatment residue must be at or below the values found in the table (("waste extract standards"); or
  (3) The waste must be treated using the technology specified in the table ("technology standard"), which are described in detail in Section 268.42, Table 1--Technology Codes and Description of Technology-Based Standards.

(b) For wastewaters, compliance with concentration level standards is based on maximums for any one day, except for D004 through D011 wastes for which the previously promulgated treatment standards based on grab samples remain in effect. For all nonwastewaters, compliance with concentration level standards is based on grab sampling. For wastes covered by the waste extract standards, the test Method 1311, the Toxicity Characteristic Leaching Procedure found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, as incorporated by reference in Section 260.11, must be used to measure compliance. An exception is made for D004 and D008, for which either of two test methods may be used: Method 1311, or Method 1310, the Extraction Procedure Toxicity Test. For wastes covered by a technology standard, the wastes may be land disposed after being treated using that specified technology or an equivalent treatment technology approved by the Administrator under the procedures set forth in Section 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 for the constituent of concern.

(d) Notwithstanding the prohibitions specified in paragraph (a) of this section, treatment and disposal facilities may demonstrate (and certify pursuant to 40 CFR 268.7(b)(5)) compliance with the treatment standards for organic constituents specified by a footnote in the table "Treatment Standards for Hazardous Waste" in this section, provided the following conditions are satisfied.
  (1) The treatment standards for the organic constituents were established based on incineration in units operated in accordance with the technical requirements of 40 CFR part 264, subpart O, or based on combustion in fuel substitution units operating in accordance with applicable technical requirements;
  (2) The treatment or disposal facility has used the methods referenced in paragraph (d)(1) of this section to treat the organic constituents; and
  (3) The treatment or disposal facility may demonstrate compliance with organic constituents 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.

(e) For characteristic wastes (D001-D003, and D012-D043) that are subject to treatment standards in the following table "Treatment Standards for Hazardous Wastes," all underlying hazardous constituents (as defined in Section 268.2(i)) must meet Universal Treatment Standards, found in Section 268.48, Table UTS, prior to land disposal as defined in Section 268.2(c) of this part.
  (1) When these wastes are managed in wastewater treatment systems regulated by the Clean Water Act (CWA), compliance with the treatment standards must be achieved no later than "end-of-pipe" as defined in Section 268.2(k); or
  (2) When these wastes are managed in CWA-equivalent treatment systems and tank-based systems that discharge onto the land, compliance with the treatment standards must be achieved no later than the point the wastewater is released to the land (e.g., spray irrigation, discharge to dry river beds, placed into evaporation ponds); or
  (3) When these wastes are managed in Class I nonhazardous injection wells, compliance with the treatment standards must be achieved no later than the well head; or

(f) The treatment standards for F001-F005 nonwastewater constituents carbon disulfide, cyclohexanone, and/or methanol apply to wastes which contain only one, two, or three of these constituents. Compliance is measured for these constituents in the waste extract from text Method 1311, the Toxicity Characteristic Leaching Procedure found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, as incorporated by reference in Section 260.11. If the waste contains any of these three constituents along with any of the other 25 constituents found in F001-F005, then compliance with treatment standards for carbon disulfide, cyclohexanone, and/or methanol are not required.

(g) Between August 26, 1996 and August 26, 1997 the treatment standards for the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste numbers K156-K161; and in 40 CFR 261.33 as EPA Hazardous Waste numbers P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U277-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U400-U404, U407, and U409-U411; and soil contaminated with these wastes; may be satisfied by either meeting the constituent concentrations presented in the table "Treatment Standards for Hazardous Wastes" in this section, or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST at § 268.42 Table 1, for nonwastewaters; and, biodegradation as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at § 268.42 Table 1, for wastewaters.

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTION AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
D001 [9]	Ignitable Characteristic Wastes, except for the §261.21(a)(1) High TOC Subcategory.	NA	NA	DEACT and meet §268.48 standards; or RORGS, or CMBST [8]	DEACT and meet §268.48 standards, or RORGS; or CMBST [8]
	High TOC Ignitable Characteristic Liquids Subcategory based on 40 CFR 261.21(a)(1) - Greater than or equal to 10% total organic carbon. (Note: This subcategory consists of nonwastewaters only)	NA	NA	NA	RORGS; or CMBST
D002 [9]	Corrosive Characteristic Wastes.	NA	NA	DEACT and meet §268.48 standards [8]	DEACT and meet §268.48 standards [8]
D002, D004, D005, D006, D007, D008, D009, D010, D011	Radioactive high level wastes generated during the reprocessing of fuel rods. (Note: This subcategory consists of nonwastewaters only.)	Corrosivity (pH)	NA	NA	HLVIT
		Arsenic	7440-38-2	NA	HLVIT
		Barium	7440-39-3	NA	HLVIT
		Cadmium	7440-43-9	NA	HLVIT
		Chromium (Total)	7440-47-3	NA	HLVIT
		Lead	7439-92-1	NA	HLVIT
		Mercury	7439-97-6	NA	HLVIT
		Selenium	7782-49-2	NA	HLVIT
		Silver	7440-22-4	NA	HLVIT
D003 [9]	Reactive Sulfides Subcategory based on 261.23(a)(5).	NA	NA	DEACT and meet §268.48 standards [8]	DEACT and meet §268.48 standards [8]
	Explosives Subcategory based on 261.23(a)(6),(7), and (8).	NA	NA	DEACT and meet §268.48 standards [8]	DEACT and meet §268.48 standards [8]
	Unexploded ordnance and other explosive devices which have been the subject of an emergency response.	NA	NA	DEACT	DEACT
	Other Reactives Subcategory based on 261.23(a)(1).	NA	NA	DEACT and meet §268.48 standards [8]	DEACT and meet §268.48 standards [8]
	Water Reactive Subcategory based on 261.23(a)(2),(3), and (4). (Note: This subcategory consists of nonwastewaters only.)	NA	NA	NA	DEACT and meet §268.48 standards [8]
	Reactive Cyanides Subcategory based on 261.23(a)(5).	Cyanides (Total)[7]	57-12-5	Reserved	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTION AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
D004	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for arsenic based on the extraction procedure (EP) in SW846 Method 1310.	Arsenic	7440-38-2	5.0	5.0 mg/l EP
		Arsenic; alternate [6] standard for nonwastewaters only.	7440-38-2	NA	5.0 mg/l TCLP
D005	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for barium based on the extraction procedure (EP) in SW846 Method 1310.	Barium	7440-39-3	100	100 mg/l TCLP
D006	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for cadmium based on the extraction procedure (EP) in SW846 Method 1310.	Cadmium	7440-43-9	1.0	1.0 mg/l TCLP
	Cadmium Containing Batteries Subcategory. (Note: This subcategory consists of nonwastewaters only.)	Cadmium	7440-43-9	NA	RTHRM
D007	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for chromium based on the extraction procedure (EP) in SW846 Method 1310.	Chromium (Total)	7440-47-3	5.0	5.0 mg/l TCLP
D008	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for lead based on the extraction procedure (EP) in SW846 Method 1310.	Lead	7439-92-1	5.0	5.0 mg/l EP
		Lead; alternate [6] standard for nonwastewaters only	7439-92-1	NA	5.0 mg/l TCLP
	Lead Acid Batteries Subcategory (Note: This standard only applies to lead acid batteries that are identified as RCRA hazardous wastes and that are not excluded elsewhere from regulation under the land disposal restrictions of 40 CFR 268 or exempted under other EPA regulations (see 40 CFR 266.80) This subcategory consists of nonwastewaters only).	Lead	7439-92-1	NA	RLEAD

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTION AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
	Radioactive Lead Solids Subcategory (Note: These lead solids include, but are not limited to, all forms of lead shielding and other elemental forms of lead. These lead solids do not include treatment residuals such as hydroxide sludges, other wastewater treatment residuals, or incinerator ashes that can undergo conventional pozzolanic stabilization, nor do they include organo-lead materials that can be incinerated and stabilized as ash.) Note: This subcategory consists of nonwastewaters only).	Lead	7439-92-1	NA	MACRO
D009	Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the extraction procedure (EP) in SW846 Method 1310; and contain greater than or equal to 260 mg/kg total mercury that also contain organics and are not incinerator residues. (High Mercury-Organic Subcategory)	Mercury	7439-97-6	NA	IMERC, or RMERC
	Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the extraction procedure (EP) in SW846 Method 1310; and contain greater than or equal to 260 mg/kg total mercury that are inorganic, including incinerator residues and residues from RMERC. (High Mercury-Inorganic Subcategory).	Mercury	7439-97-6	NA	RMERC

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTION AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
	Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the extraction procedure (EP) in SW846 Method 1310; and contain less than 260 mg/kg total mercury. (Low Mercury Subcategory)	Mercury	7439-97-6	NA	0.20 mg/l TCLP
	All D009 wastewaters.	Mercury	7439-97-6	0.20	NA
	Elemental mercury contaminated with radioactive materials. (Note: This subcategory consists of nonwastewaters only.)	Mercury	7439-97-6	NA	AMLGM
	Hydraulic oil contaminated with Mercury Radioactive Materials Subcategory. (Note: This subcategory consists of nonwastewaters only.)	Mercury	7439-97-6	NA	IMERC
D010	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for selenium based on the extraction procedure (EP) in SW846 Method 1310.	Selenium	7782-49-2	1.0	5.7 mg/l TCLP
D011	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for silver based on the extraction procedure (EP) in SW846 Method 1310.	Silver	7440-22-4	5.0	5.0 mg/l TCLP
D012 [9]	Wastes that are TC for Endrin based on the TCLP in SW846 Method 1311.	Endrin	72-20-8	BIODG; or CMBST	0.13 and meet §268.48 standards [8]
		Endrin aldehyde	7421-93-4	BIODG; or CMBST	0.13 and meet §268.48 standards [8]

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTION AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
D013 [9]	Wastes that are TC for Lindane based on the TCLP in SW846 Method 1311.	alpha-BHC	319-84-6	CARBN; OR CMBST	0.066 and meet §268.48 standards [8]
		beta-BHC	319-85-7	CARBN; OR CMBST	0.066 and meet §268.48 standards [8]
		delta-BHC	319-86-8	CARBN; OR CMBST	0.066 and meet §268.48 standards [8]
		gamma-BHC (Lindane)	58-89-9		
D014 [9]	Wastes that are TC for Methoxychlor based on the TCLP in SW846 Method 1311.	Methoxychlor	72-43-5	WETOX or CMBST	0.18 and meet §268.48 standards [8]
D015 [9]	Wastes that are TC for Toxophene based on the TCLP in SW846 Method 1311.	Toxaphene	8001-35-2	BIODG or CMBST	2.6 and meet §268.48 standards [8]
D016 [9]	Wastes that are TC for 2,4-D-(2,4-Dichlorophenoxyacetic acid) based on the TCLP in SW846 Method 1311.	2,4-D (2,4-Dichlorophenoxyacetic acid)	94-75-7	CHOXD, BIODG, OR CMBST	10 and meet §268.48 standards [8]
D017 [9]	Wastes that are TC for 2,4,5-TP (Silvex) based on the TCLP in SW846 Method 1311.	2,4,5 -TP (Silvex)	93-72-1	CHOXD or CMBST	7.9 and meet §268.48 standards [8]
D018 [9]	Wastes that are TC for Benzene based on the TCLP in SW846 Method 1311.	Benzene	71-43-2	0.14 and meet §268.48 standards [8]	10 and meet §268.48 standards [8]
D019 [9]	Wastes that are TC for Carbon tetrachloride based on the TCLP in SW846 Method 1311.	Carbon tetrachloride	56-23-5	0.057 and meet §268.48 standards [8]	6.0 and meet §268.48 standards [8]
D020 [9]	Wastes that are TC for Chlordane based on the TCLP in SW846 Method 1311.	Chlordane (alpha and gamma isomers)	57-74-9	0.0033 and meet §268.48 standard [8]	0.26 and meet §268.48 standards [8]
D021 [9]	Wastes that are TC for Chlorobenzene based on the TCLP in SW846 Method 1311.	Chlorobenzene	108-90-7	0.057 and meet §268.48 standards [8]	6.0 and meet §268.48 standards [8]

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTION AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
D022 [9]	Wastes that are TC for Chloroform based on the TCLP in SW846 Method 1311.	Chloroform	67-66-3	0.046 and meet §268.48 standards [8]	6.0 and meet §268.48 standards [8]
D023 [9]	Wastes that are TC for o-Cresol based on the TCLP in SW846 Method 1311.	o-Cresol	95-48-7	0.11 and meet §268.48 standards [8]	5.6 and meet §268.48 standards [8]
D024 [9]	Wastes that are TC for m-Cresol based on the TCLP in SW846 Method 1311.	m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77 and meet §268.48 standards [8]	5.6 and meet §268.48 standards [8]
D025 [9]	Wastes that are TC for p-Cresol based on the TCLP in SW846 Method 1311.	p-Cresol (difficult to distinguish from m-cresol)	106-44-5	0.77 and meet §268.48 standards [8]	5.6 and meet §268.48 standards [8]
D026 [9]	Wastes that are TC for Cresols (Total) based on the TCLP in SW846 Method 1311.	Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations)	1319-77-3	0.88 and meet §268.48 standards [8]	11.2 and meet §268.48 standards [8]
D027 [9]	Wastes that are TC for p-Dichlorobenzene based on the TCLP in SW846 Method 1311.	p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	0.090 and meet §268.48 standards [8]	6.0 and meet §268.48 standards [8]
D028 [9]	Wastes that are TC for 1,2-Dichloroethane based on the TCLP in SW846 Method 1311.	1,2-Dichloroethane	107-06-2	0.21 and meet §268.48 standards [8]	6.0 and meet §268.48 standards [8]
D029 [9]	Wastes that are TC for 1,1-Dichloroethylene based on the TCLP in SW846 Method 1311.	1,1-Dichloroethylene	75-35-4	0.025 and meet §268.48 standards [8]	6.0 and meet §268.48 standards [8]
D030 [9]	Wastes that are TC for 2,4-Dinitrotoluene based on the TCLP in SW846 Method 1311.	2,4-Dinitrotoluene	121-14-2	0.32 and meet §268.48 standards [8]	140 and meet §268.48 standards [8]
D031 [9]	Wastes that are TC for Heptachlor based on the TCLP in SW846 Method 1311.	Heptachlor	76-44-8	0.0012 and meet §268.48 standards [8]	0.066 and meet §268.48 standards [8]
		Heptachlor epoxide	1024-57-3	0.016 and meet §268.48 standards [8]	0.066 and meet §268.48 standards [8]
D032 [9]	Wastes that are TC for Hexachlorobenzene based on the TCLP in SW846 Method 1311.	Hexachlorobenzene	118-74-1	0.055 and meet §268.48 standards [8]	10 and meet §268.48 standards [8]

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTION AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
D033 [9]	Wastes that are TC for Hexachlorobutadiene based on the TCLP in SW846 Method 1311.	Hexachlorobutadiene	87-68-3	0.055 and meet §268.48 standards [8]	5.6 and meet §268.48 standards [8]
D034 [9]	Wastes that are TC for Hexachloroethane based on the TCLP in SW846 Method 1311.	Hexachloroethane	67-72-1	0.055 and meet §268.48 standards [8]	30 and meet §268.48 standards [8]
D035 [9]	Wastes that are TC for Methyl ethyl ketone based on the TCLP in SW846 Method 1311.	Methyl ethyl ketone	78-93-3	0.28 and meet §268.48 standards [8]	36 and meet §268.48 standards [8]
D036 [9]	Wastes that are TC for Nitrobenzene based on the TCLP in SW846 Method 1311.	Nitrobenzene	98-95-3	0.068 and meet §268.48 standards [8]	14 and meet §268.48 standards [8]
D037 [9]	Wastes that are TC for Pentachlorophenol based on the TCLP in SW846 Method 1311.	Pentachlorophenol	87-86-5	0.089 and meet §268.48 standards [8]	7.4 and meet §268.48 standards [8]
D038	Wastes that are TC for Pyridine based on the TCLP in SW846 Method 1311.	Pyridine	110-86-1	0.014 and meet §268.48 standards [8]	16 and meet §268.48 standards [8]
D039 [9]	Wastes that are TC for Tetrachloroethylene based on the TCLP in SW846 Method 1311.	Tetrachloroethylene	127-18-4	0.056 and meet §268.48 standards [8]	6.0 and meet §268.48 standards [8]
D040 [9]	Wastes that are TC for Trichloroethylene based on the TCLP in SW846 Method 1311.	Trichloroethylene	79-01-6	0.054 and meet §268.48 standards [8]	6.0 and meet §268.48 standards [8]
D041 [9]	Wastes that are TC for 2,4,5-Trichlorophenol based on the TCLP in SW846 Method 1311.	2,4,5-Trichlorophenol	95-95-4	0.18 and meet §268.48 standards [8]	7.4 and meet §268.48 standards [8]
D042 [9]	Wastes that are TC for 2,4,6-Trichlorophenol based on the TCLP in SW846 Method 1311.	2,4,6-Trichlorophenol	88-06-2	0.035 and meet §268.48 standards [8]	7.4 and meet §268.48 standards [8]
D043 [9]	Wastes that are TC for Vinyl choloride based on the TCLP in SW846 Method 1311.	Vinyl chloride	75-01-4	0.27 and meet §268.48 standards [8]	6.0 and meet §268.48 standards [8]
F001, F002, F003, F004,	F001, F002, F003, F004 and/or F005 solvent wastes that contain	Acetone Benzene	67-64-1 71-43-2	0.28 0.14	160 10

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTION AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
& F005	any combination of one or more of the following spent solvents: acetone, benzene, n-butyl alcohol, carbon disulfide, carbon tetrachloride, chlorinated fluorocarbons, chlorobenzene, o-cresol, m-cresol, p-cresol, cyclohexanone, o-dichlorobenzene, 2-ethoxyethanol, ethyl acetate, ethyl benzene, ethyl ether, isobutyl alcohol, methanol, methylene chloride, methyl ethyl ketone, methyl isobutyl ketone, nitrobenzene, 2-nitropropane, pyridine, tetrachloroethylene, toluene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, trichloroethylene, trichloromonofluoromethane, and/or xylenes (except as specifically noted in other subcategories). See further details of these listings in §261.31.	n-Butyl alcohol	71-36-3	5.6	2.6
		Carbon disulfide	75-15-0	3.8	NA
		Carbon tetrachloride	56-23-5	0.057	6.0
		Chlorobenzene	108-90-7	0.057	6.0
		o-Cresol	95-48-7	0.11	5.6
		m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6
		p-Cresol (difficult to distinguish from m-cresol)	106-44-5	0.77	5.6
		Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations)	1319-77-3	0.88	11.2
		Cyclohexanone	108-94-1	0.36	NA
		o-Dichlorobenzene	95-50-1	0.088	6.0
		Ethyl acetate	141-78-6	0.34	33
		Ethyl benzene	100-41-4	0.057	10
		Ethyl ether	60-29-7	0.12	160
		Isobutyl alcohol	78-83-1	5.6	170
		Methanol	67-56-1	5.6	NA
		Methylene chloride	75-9-2	0.089	30
		Methyl ethyl ketone	78-93-3	0.28	36
		Methyl isobutyl ketone	108-10-1	0.14	33
		Nitrobenzene	98-95-3	0.068	14
		Pyridine	110-86-1	0.014	16
		Tetrachoroethylene	127-18-4	0.056	6.0
		Toluene	108-88-3	0.080	10
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.057	30
		Trichloroethylene	79-01-6	0.054	6.0
		Trichloromonofluoro-methane	75-69-4	0.020	30
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
	F003 and/or F005 solvent wastes that contain any combination of one or more of the following	Carbon disulfide	75-15-0	3.8	4.8 mg/l TCLP
		Cyclohexanone	108-94-1	0.36	0.75 mg/l TCLP
		Methanol	67-56-1	5.6	0.75 mg/l TCLP

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTION AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
	three solvents as the only listed F001-5 solvents: carbon disulfide, cyclohexanone, and/or methanol. (formerly 268.41(c))				
	F005 solvent waste containing 2-Nitropropane as the only listed F001-5 solvent.	2-Nitropropane	79-46-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
	F005 solvent waste containing 2-Ethoxyethanol as the only listed F001-5 solvent.	2-Ethoxyethanol	110-80-5	BIODG; or CMBST	CMBST
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.	Cadmium	7440-43-9	0.69	0.19 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
		Nickel	7440-02-0	3.98	5.0 mg/l TCLP
		Silver	7440-22-4	NA	0.30 mg/l TCLP
F007	Spent cyanide plating bath solutions from electroplating operations.	Cadmium	7440-43-9	NA	0.19 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
		Nickel	7440-02-0	3.98	5.0 mg/l TCLP
		Silver	7440-22-4	NA	0.30 mg/l TCLP
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.	Cadmium	7440-43-9	NA	0.19 mg/l TCLP
		Chromium (Total	7440-47-3	2.77	0.86 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
		Lead	7439-92-1	0.69	0.37 mg/l TCLP

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTION AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		Nickel	7440-02-0	3.98	5.0 mg/l TCLP
		Silver	7440-22-4	NA	0.30 mg/l TCLP
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.	Cadmium	7440-43-9	NA	0.19 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
		Nickel	7440-02-0	3.98	5.0 mg/l TCLP
		Silver	7440-22-4	NA	0.30 mg/l TCLP
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.	Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	NA
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.	Cadmium	7440-43-9	NA	0.19 mg/l TCLP
		Chromium (Total	7440-47-3	2.77	0.86 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
		Nickel	7440-02-0	3.98	5.0 mg/l TCLP
		Silver	7440-22-4	NA	0.30 mg/l TCLP
F012	Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.	Cadmium	7440-43-9	NA	0.19 mg/l TCLP
		Chromium (Total	7440-47-3	2.77	0.86 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
		Nickel	7440-02-0	3.98	5.0 mg/l TCLP
		Silver	7440-22-4	NA	0.30 mg/l TCLP
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process.	Chromium (Total	7440-47-3	2.77	0.86 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTION AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
F020, F021, F022, F023, F026	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of: (1) tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives, excluding wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol (F020); (2) pentachlorophenol, or of intermediates used to produce its derivatives (i.e., F021); (3) tetra-, penta-, or hexachlorobenzenes under alkaline conditions (i.e., F022); and from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of: (1) tri- or tetrachlorophenols, excluding wastes from equipment used only for the production of Hexachlorophene from highly purified 2, 4, 5-trichlorophenol (F023); (2) tetra-, penta-, or hexachlorobenzenes under alkaline conditions (i.e., F026).	HxCDDs (All Hexachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (All Hexachlorodibenzofurans)	NA	0.000063	0.001
		PeCDDs (All Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (All Pentachlorodibenzofurans)	NA	0.000035	0.001
		Pentachlorophenol	87-86-5	0.089	7.4
		TCDDS (All Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (All Tetrachlorodibenzo-furans)	NA	0.000063	0.001
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
		2,3,4,6-Tetrachlorophenol	58-90-2	0.030	7.4
F024	Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of	All F024 wastes	NA	CMBST	CMBST
		2-Chloro-1,3-butadiene	126-99-8	0.057	0.28
		3-Chloropropylene	107-05-1	0.036	30
		1,1-Dichloroethane	75-34-3	0.059	6.0
		1,2-Dichloroethane	107-06-2	0.21	6.0
		1,2-Dichloropropane	78-87-5	0.85	18
		cis-1,3-Dichloropropylene	10061-01-5	0.036	18
		trans-1,3-Dichloropropylene	10061-02-6	0.036	18
		bis (2-Ethylhexyl) phthalate	117-81-7	0.28	28

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTION AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
	chlorine substitution. (This listing does not include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in §261.31 or §261.32.).	Hexachloroethane Chromium (Total) Nickel	67-72-1 7440-47-3 7440-02-0	0.055 2.77 3.98	30 0.86 mgl TCLP 5.0 mg/l TCLP
F025	Condensed light ends from the production of certain chlorinated aliphatic hydrocarbons, by free radiacal catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	Carbon tetrachloride Chloroform 1,2-Dichloroethane 1,1-Dichloroethylene Methylene chloride 1,1,2-Trichloroethane Trichloroethylene Vinyl chloride	56-23-5 67-66-3 107-06-2 75-35-4 75-9-2 79-00-5 79-01-6 75-01-4	0.057 0.046 0.21 0.025 0.089 0.054 0.054 0.27	6.0 6.0 6.0 6.0 30 6.0 6.0 6.0
	F025 - Light Ends Subcategory. Spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution.	Carbon tetrachloride Chloroform Hexachlorobenzene Hexachlorobutadiene Hexachloroethane Methylene chloride 1,1,2-Trichloroethane Trichloroethylene Vinyl chloride	56-23-5 67-66-3 118-74-1 87-68-3 67-72-1 75-9-2 79-00-5 79-01-6 75-01-4	0.057 0.046 0.055 0.055 0.055 0.089 0.054 0.054 0.27	6.0 6.0 10 5.6 30 30 6.0 6.0 6.0
	F025 - Spent Filters/Aids and Desiccants Subcategory.				
F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.).	HxCDDs (All Hexachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (All Hexachlorodibenzofurans)	NA	0.000063	0.001
		PeCDDs (All Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (All Pentachlorodibenzofurans)	NA	0.000035	0.001
		Pentachlorophenol	87-86-5	0.089	7.4
		TCDDS (All	NA	0.00063	0.001

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTION AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		Tetrachlorodibenzo-p-dioxins)			
		TCDFs (All Tetrachlorodibenzo-furans)	NA	0.000063	0.001
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
		2,3,4,6-Tetrachlorophenol	58-90-2	0.030	7.4
F028	Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Wastes Nos. F020, F021, F023, F026, and F027.	HxCDDs (All Hexachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (All Hexa-chlorodibenzofurans)	NA	0.000063	0.001
		PeCDDs (All Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (All Pentachlorodibenzo-furans)	NA	0.000035	0.001
		Pentachlorophenol	87-86-5	0.089	7.4
		TCDDS (All Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (All Tetrachlorodibenzo-furans)	NA	0.000063	0.001
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
		2,3,4,6-Tetrachlorophenol	58-90-2	0.30	7.4
F037	Petroleum refinery primary oil/water/solids separation sludge---Any sludge generated from the gravitational separation	Acenaphthene	83-32-9	0.059	NA
		Anthracene	120-12-7	0.059	3.4
		Benzene	71-43-2	0.14	10
		Benz(a)anthracene	56-55-3	0.059	3.4

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTION AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
	of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in: oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in §261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing.	Benzo(a)pyrene	50-32-8	0.061	3.4
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
		Chrysene	218-01-9	0.059	3.4
		Di-n-butyl phthalate	84-74-2	0.057	28
		Ethylbenzene	100-41-4	0.057	10
		Fluorene	86-73-7	0.059	NA
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.080	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	5.0 mg/l TCLP

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l[3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
F038	Petroleum refinery secondary (emulsified) oil/water/solids separation sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air floatation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in §261.31(b)(2) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological units) and F037, K048, and K051 are not included in this listing.	Benzene	71-43-2	0.14	10
		Benzo (a) pyrene	50-32-8	0.061	3.4
		bis-(2-Ethylhexyl) phthalate	117-81-7	0.28	28
		Chrysene	218-01-9	0.059	3.4
		Din-n-butyl phthalate	84-74-2	0.057	28
		Ethylbenzene	100-41-4	0.057	10
		Fluorene	86-73-7	0.059	NA
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.080	10
		Xylenes-mixed isomers (sum of o-, m-, and p- xylene concentrations)	1330-20-7	0.32	30
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	5.0 mg/l TCLP
F039	Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under subpart D of this part. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028.).	Acenaphthylene	208-96-8	0.059	3.4
		Acenaphthene	83-32-9	0.059	3.4
		Acetone	67-64-1	0.28	160
		Acetonitrile	75-05-8	5.6	NA
		Acetophenone	96-86-2	0.010	9.7
		2-Acetylaminofluorene	53-96-3	0.059	140
		Acrolein	107-02-8	0.29	NA
		Acrylonitrile	107-13-1	0.24	84
		Aldrin	309-00-2	0.021	0.066
		4-Aminobiphenyl	92-67-1	0.13	NA
		Aniline	62-53-3	0.81	14
		Anthracene	120-12-7	0.059	3.4
		Aramite	140-57-8	0.36	NA
		alpha-BHC	319-84-6	0.00014	0.066
		beta-BHC	319-85-7	0.00014	0.066
		delta-BHC	319-86-8	0.023	0.066
		gamma BHC	58-89-9	0.0017	0.066
		Benzene	71-43-2	0.14	10
		Benz(a)anthracene	56-55-3	0.059	3.4

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l[3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		Benzo(b)fluoranthene (difficult to distinguish from benzo (k) fluoranthene)	205-99-2	0.11	6.8
		Benzo (k) fluoranthene (difficult to distinguish from benzo (b) fluoranthene)	207-08-9	0.11	6.8
		Benzo(g,h,i)perylene	191-24-2	0.0055	1.8
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Bromodichloromethane	75-27-4	0.35	15
		Methyl bromide (Bromomethane)	74-83-9	0.11	15
		4-Bromophenyl phenyl ether	101-55-3	0.055	15
		n-Butyl alcohol	71-36-3	5.6	2.6
		Butyl benzyl phthalate	85-68-7	0.017	28
		2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	88-85-7	0.066	2.5
		Carbon disulfide	75-15-0	3.8	NA
		Carbon tetrachloride	56-23-5	0.057	6.0
		Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
		p-Chloroaniline	106-47-8	0.46	16
		Chlorobenzene	108-90-7	0.057	6.0
		Chlorobenzilate	510-15-6	0.10	NA
		2-Chloro-1,3-butadiene	126-99-8	0.057	NA
		Chlorodibromomethane	124-48-1	0.057	15
		Chloroethane	75-00-3	0.27	6.0
		bis(2-Chloroethoxy) methane	111-91-1	0.036	7.2
		bis(2-Chloroethyl) ether	111-44-4	0.033	6.0
		Chloroform	67-66-3	0.046	6.0
		bis(2-Chloroisopropyl) ether	39638-32-9	0.055	7.2
		p-Chloro-m-cresol	59-50-7	0.018	14
		Chloromethane (Methyl chloride)	74-87-3	0.19	30
		2-Chloronaphthalene	91-58-7	0.055	5.6
		2-Chlorophenol	95-57-8	0.044	5.7
		3-Chloropropylene	107-05-1	0.036	30
		Chrysene	218-01-9	0.059	3.4
		o-Cresol	95-48-7	0.11	5.6
		m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6
		p-Cresol (difficult to	106-44-5	0.77	5.6

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l[3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		distinguish from m-cresol)			
		Cyclohexanone	108-94-1	0.36	NA
		1,2-Dibromo-3-chloropropane	96-12-8	0.11	15
		Ethylene dibromide (1,2-Dibromoethane)	106-93-4	0.028	15
		Dibromomethane	74-95-3	0.11	15
		2,4-D (2,4-Dichlorophenoxyacetic acid)	94-75-7	0.72	10
		o,p'-DDD	53-19-0	0.023	0.87
		p,p'-DDD	72-54-8	0.023	0.087
		o,p'-DDE	3424-82-6	0.031	0.087
		p,p'-DDE	72-55-9	0.031	0.087
		o,p'-DDT	789-02-6	0.0039	0.087
		p,p'-DDT	50-29-3	0.0039	0.087
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Dibenz(a,e)pyrene	192-65-4	0.061	NA
		m-Dichlorobenzene	541-73-1	0.036	6.0
		o-Dichlorobenzene	95-50-1	0.088	6.0
		p-Dichlorobenzene	106-46-7	0.090	6.0
		Dichlorodifluoro-methane	75-71-8	0.23	7.2
		1,1-Dichloroethane	75-34-3	0.059	6.0
		1,2-Dichloroethane	107-06-2	0.21	6.0
		1,1-Dichloroethylene	75-35-4	0.025	6.0
		trans-1,2-Dichloroethylene	156-60-5	0.054	30
		2,4-Dichlorophenol	120-83-2	0.044	14
		2,6-Dichlorophenol	87-65-0	0.044	14
		1,2-Dichloropropane	78-87-5	0.85	18
		cis-1,3-Dichloropropylene	10061-01-5	0.036	18
		trans-1,3-Dichloro-propylene	10061-02-6	0.036	18
		Dieldrin	60-57-1	0.017	0.13
		Diethyl phthalate	84-66-2	0.20	28
		2-4-Dimethyl phenol	105-67-9	0.036	14
		Dimethyl phthalate	131-11-3	0.047	28
		Di-n-butyl phthalate	84-74-2	0.057	28
		1,4-Dinitrobenzene	100-25-4	0.32	2.3
		4,6-Dinitro-o-cresol	534-52-1	0.28	160
		2,4-Dinitrophenol	51-28-5	0.12	160
		2,4-Dinitrotoluene	121-14-2	0.32	140

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l[3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		2,6-Dinitrotoluene	606-20-2	0.55	28
		Di-n-octyl phthalate	117-84-0	0.017	28
		Di-n-propylnitrosamine	621-64-7	0.40	14
		1,4-Dioxane	123-91-1	12.0	170
		Diphenylamine (difficult to distinguish from diphenylnitrosamine)	122-39-4	0.92	NA
		Diphenylnitrosamine (difficult to distinguish from diphenylamine)	86-30-6	0.92	NA
		1,2-Diphenylhydrazine	122-66-7	0.087	NA
		Disulfoton	298-04-4	0.017	6.2
		Endosulfan I	939-98-8	0.023	0.066
		Endosulfan II	33213-6-5	0.029	0.13
		Endosulfan sulfate	131-07-8	0.029	0.13
		Endrin	72-20-8	0.0028	0.13
		Endrin aldehyde	7421-93-4	0.025	0.13
		Ethyl acetate	141-78-6	0.34	33
		Ethyl cyanide (Propanenitrile)	107-12-0	0.24	360
		Ethyl benzene	100-41-4	0.057	10
		Ethyl ether	60-29-7	0.12	160
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
		Ethyl methacrylate	97-63-2	0.14	160
		Ethylene oxide	75-21-8	0.12	NA
		Famphur	52-85-7	0.017	15
		Fluoranthene	206-44-0	0.068	3.4
		Fluorene	86-73-7	0.059	3.4
		Heptachlor	76-44-8	0.0012	0.066
		Heptachlor epoxide	1024-57-3	0.016	0.066
		Hexachlorobenzene	118-74-1	0.055	10
		Hexachlorobutadiene	87-68-3	0.055	5.6
		Hexachlorocyclopenta-diene	77-47-4	0.057	2.4
		HxCDDs (All Hexachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (All Hexachlorodibenzo-furans)	NA	0.000063	0.001
		Hexachloroethane	67-72-1	0.055	30
		Hexachloropropylene	1888-71-7	0.035	30
		Indeno (1,2,3-c,d)	193-39-5	0.0055	3.4

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WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l[3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		pyrene			
		Iodomethane	74-88-4	0.19	65
		Isobutyl alcohol	78-83-1	5.6	170
		Isodrin	465-73-6	0.021	0.066
		Isosafrole	120-58-1	0.081	2.6
		Kepone	143-50-8	0.0011	0.13
		Methacrylonitrile	126-98-7	0.24	84
		Methanol	67-56-1	5.6	NA
		Methapyrilene	91-80-5	0.081	1.5
		Methoxychlor	72-43-5	0.25	0.18
		3-Methylcholanthrene	56-49-5	0.0055	15
		4,4-Methylene bis(2-chloroaniline)	101-14-4	0.50	30
		Methylene chloride	75-09-2	0.089	30
		Methyl ethyl ketone	78-93-3	0.28	36
		Methyl isobutyl ketone	108-10-1	0.14	33
		Methyl methacrylate	80-62-6	0.14	160
		Methyl methansulfonate	66-27-3	0.018	NA
		Methyl parathion	298-00-0	0.014	4.6
		Naphthalene	91-20-3	0.059	5.6
		2-Naphthylamine	91-59-8	0.52	NA
		p-Nitroaniline	100-01-6	0.028	28
		Nitrobenzene	98-95-3	0.068	14
		5-Nitro-o-toluidine	99-55-8	0.32	28
		p-Nitrophenol	100-02-7	0.12	29
		N-Nitrosodiethylamine	55-18-5	0.40	28
		N-Nitrosodimethylamine	62-75-9	0.40	2.3
		N-Nitroso-di-n-butylamine	924-16-3	0.40	17
		N-Nitrosomethyl-ethylamine	10595-95-6	0.40	NA
		N-Nitrosomorpholine	59-89-2	0.40	2.3
		N-Nitrosopiperidine	100-75-4	0.013	35
		N-Nitrosopyrrolidine	930-55-2	0.013	35
		Parathion	56-38-2	0.014	4.6
		Total PCBs (sum of all PCB isomers, or all Aroclors)	1336-36-3	0.10	10
		Pentachlorobenzene	608-93-5	0.055	10
		PeCDDS (All Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (All Pentachlorodibenzo-furans)	NA	0.000035	0.001
		Pentachloronitro-benzene	82-68-8	0.055	4.8

Treatment Standards For Hazardous Wastes

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WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l[3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		Pentachlorophenol	87-86-5	0.089	7.4
		Phenacetin	62-44-2	0.081	16
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Phorate	298-02-2	0.021	4.6
		Phthalic anhydride	85-44-9	0.055	28
		Pronamide	23950-58-5	0.093	1.5
		Pyrene	129-00-0	0.067	8.2
		Pyridine	110-86-1	0.014	16
		Safrole	94-59-7	0.081	22
		Silvex (2,4,5-TP)	93-72-1	0.72	7.9
		2,4,5-T	93-76-5	0.72	7.9
		1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14
		TCDDs (All Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (All Tetrachlorodibenzofurans)	NA	0.000063	0.001
		1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethylene	127-18-4	0.056	6.0
		2,3,4,6-Tetrachlorophenol	58-90-2	0.030	7.4
		Toluene	108-88-3	0.080	10
		Toxaphene	8001-35-2	0.0095	2.6
		Bromoform (Tribromomethane)	75-25-2	0.63	15
		1,2,4-Trichlorobenzene	120-82-1	0.055	19
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		Trichloroethylene	79-01-6	0.054	6.0
		Trichloromonofluoromethane	75-69-4	0.020	30
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
		1,2,3-Trichloropropane	96-18-4	0.85	30
		1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.057	30
		tris(2,3-Dibromopropyl) phosphate	126-72-7	0.11	NA
		Vinyl chloride	75-01-4	0.27	6.0
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Antimony	7440-36-0	1.9	2.1 mg/l TCLP
		Arsenic	7440-38-2	1.4	5.0 mg/l TCLP

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l[3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		Barium	7440-39-3	1.2	7.6 mg/l TCLP
		Beryllium	7440-41-7	0.82	NA
		Cadmium	7440-43-9	0.69	0.19 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	NA
		Fluoride	16964-48-8	35	NA
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
		Mercury	7439-97-6	0.15	0.025 mg/l TCLP
		Nickel	7440-02-0	3.98	5.0 mg/l TCLP
		Selenium	7782-49-2	0.82	0.16 mg/l TCLP
		Silver	7440-22-4	0.43	0.30 mg/l TCLP
		Sulfide	8496-25-8	14	NA
		Thallium	7440-28-0	1.4	NA
		Vanadium	7440-62-2	4.3	NA
K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.	Naphthalene	91-20-3	0.059	5.6
		Pentachlorophenol	87-86-5	0.089	7.4
		Phenanthrene	85-01-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.080	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments.	Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
K003	Wastewater treatment sludge from the production of molybdate orange pigments.	Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
K004	Wastewater treatment sludge from the production of zinc yellow pigments.	Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
K005	Wastewater treatment sludge from the production of chrome green pigments.	Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Lead	7439-92-1	0.69	0.37 mg/L TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
K006	Wastewater treatment sludge from the production of chrome oxide	Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Lead	7439-92-1	0.69	0.37 mg/l TCLP

Treatment Standards For Hazardous Wastes

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WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l[3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
	green pigments (anhydrous).				
	Wastewater treatment sludge from the production of chrome oxide green pigments (hydrated).	Chromium (Total) Lead	7440-47-3 7439-92-1	2.77 0.69	0.86 mg/l TCLP NA
K007	Wastewater treatment sludge from the production of iron blue pigments.	Chromium (Total) Lead Cyanides (Total)[7]	7440-47-3 7439-92-1 57-12-5	2.77 0.69 1.2	0.86 mg/l TCLP 0.37 mg/l TCLP 590
K008	Oven residue from the production of chrome oxide green pigments.	Chromium (Total) Lead	7440-47-3 7439-92-1	2.77 0.69	0.86 mg/l 0.37 mg/l TCLP
K009	Distillation bottoms from the production of acetaldehyde from ethylene.	Chloroform	67-66-3	0.046	6.0
K010	Distillation side cuts from the production of acetaldehyde from ethylene.	Chloroform	67-66-3	0.046	6.0
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile.	Acetonitrile Acrylonitrile Acrylamide Benzene Cyanide (Total)	75-05-8 107-13-1 79-06-1 71-43-2 57-12-5	5.6 0.24 19 0.14 1.2	38 84 23 10 590
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile.	Acetonitrile Acrylonitrile Acrylamide Benzene Cyanide (Total)	75-05-8 107-13-1 79-06-1 71-43-2 57-12-5	5.6 0.24 19 0.14 1.2	38 84 23 10 590
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile.	Acetonitrile Acrylonitrile Acrylamide Benzene Cyanide (Total)	75-05-8 107-13-1 79-06-1 71-43-2 57-12-5	5.6 0.24 19 0.14 1.2	38 84 23 10 590
K015	Still bottoms from the distillation of benzyl chloride.	Anthracene Benzal chloride Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)	120-12-7 98-87-3 205-99-2 207-08-9	0.059 0.055 0.11 0.11	3.4 6.0 6.8 6.8

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		COMMON NAME	CAS [2] NO	Concentration in mg/l[3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		Phenanthrene	85-01-8	0.059	5.6
		Toluene	108-88-3	0.080	10
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Nickel	7440-02-0	3.98	5.0 mg/l TCLP
K016	Heavy ends or distillation residues from the production of carbon tetrachloride.	Hexachlorobenzene	118-74-1	0.055	10
		Hexachlorobutadiene	87-68-3	0.055	5.6
		Hexachlorocyclopenta-diene	77-47-4	0.057	2.4
		Hexachloroethane	67-72-1	0.055	30
		Tetrachloroethylene	127-18-4	0.056	6.0
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.	bis(2-Chloroethyl) ether	111-44-4	0.033	6.0
		1,2-Dichloropropane	78-87-5	0.85	18
		1,2,3-Trichloropropane	96-18-4	0.85	30
K018	Heavy ends from the fractionation column in ethyl chloride production.	Chloroethane	75-00-3	0.27	6.0
		Chloromethane	74-87-3	0.19	NA
		1,1-Dichloroethane	75-34-3	0.059	6.0
		1,2-Dichloroethane	107-06-2	0.21	6.0
		Hexachlorobenzene	118-74-1	0.055	10
		Hexachlorobutadiene	87-68-3	0.055	5.6
		Hexachloroethane	67-72-1	0.055	30
		Pentachloroethane	76-01-7	NA	6.0
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.	bis(2-Chloroethyl) ether	111-44-4	0.033	6.0
		Chloroebenzene	108-90-7	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		p-Dichlorobenzene	106-46-7	0.090	NA
		1,2-Dichloroethane	107-06-2	0.21	6.0
		Fluorene	86-73-7	0.059	NA
		Hexachloroethane	67-72-1	0.055	30
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	NA
		Tetrachloroethylene	127-18-4	0.056	6.0
		1,2,4-Trichlorobenzene	120-82-1	0.055	19
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.	1.2-Dichloroethane	107-06-2	0.21	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethylene	127-18-4	0.056	6.0

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		COMMON NAME	CAS [2] NO	Concentration in mg/l[3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
K021	Aqueous spent antimony catalyst waste from fluoromethanes production.	Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Antimony	7440-36-0	1.9	2.1 mg/l TCLP
K022	Distillation bottom tars from the production of phenol/acetone from cumene.	Toluene	108-88-3	0.080	10
		Acetophenone	96-86-2	0.010	9.7
		Diphenylamine (difficult to distinguish from diphenylnitrosamine)	122-39-4	0.92	13
		Diphenylnitrosamine (difficult to distinguish from diphenylamine)	86-30-6	0.92	13
		Phenol	108-95-2	0.039	6.2
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Nickel	7440-02-0	3.98	5.0 mg/l TCLP
K023	Distillation light ends from the production of phthalic anhydride from naphthalene.	Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	100-21-0	0.055	28
		Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	85-44-9	0.055	28
K024	Distillation bottoms from the production of phthalic anhydride from napthalene.	Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	100-21-0	0.055	28
		Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	85-44-9	0.055	28
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.	NA	NA	LLEXT fb SSTRP fb CARBN; or CMBST	CMBST
K026	Stripping still tails from the production of methyl ethyl pyridines.	NA	NA	CMBST	CMBST
K027	Centrifuge and distillation residues from toluene diisocyanate production.	NA	NA	CARBN; or CMBST	CMBST
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-	1,1-Dichloroethane	75-34-3	0.059	6.0
		trans-1,2-Dichloroethylene	156-60-8	0.054	30

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l[3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
	trichloroethane.	Hexachlorobutadiene	87-68-3	0.055	5.6
		Hexachloroethane	67-72-1	0.055	30
		Pentachloroethane	76-01-7	NA	6.0
		1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethylene	127-18-4	0.056	6.0
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		Cadmium	7440-43-9	0.69	NA
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
		Nickel	7440-02-0	3.98	5.0 mg/l TCLP
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane.	Chloroform	67-66-3	0.046	6.0
		1,2-Dichloroethane	107-06-2	0.21	6.0
		1,1-Dichloroethylene	75-35-4	0.025	6.0
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
		Vinyl chloride	75-01-4	0.27	6.0
		o-Dichlorobenzene	95-50-1	0.088	NA
K030	Column bodies or heavy ends from the combined production of trichloroethylene and perchloroethylene.	p-Dichlorobenzene	106-46-7	0.090	NA
		Hexachlorobutadiene	87-68-3	0.055	5.6
		Hexachloroethane	67-72-1	0.055	30
		Hexachloropropylene	1888-71-7	NA	30
		Pentachlorobenzene	608-93-5	NA	10
		Pentachloroethane	76-01-7	NA	6.0
		1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14
		Tetrachloroethylene	127-18-4	0.056	6.0
		1,2,4-Trichlorobenzene	120-82-1	0.055	19
K031	By-product salts generated in the production of MSMA and cacodylic acid.	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
K032	Wastewater treatment sludge from the production of chlordane.	Hexachlorocyclopenta-diene	77-47-4	0.057	2.4
		Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
		Heptachlor	76-44-8	0.0012	0.066
		Heptachlor epoxide	1024-57-3	0.016	0.066
K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.	Hexachlorocyclopenta-diene	77-47-4	0.057	2.4
K034	Filter solids from the filtration	Hexachlorocyclopenta-	77-47-4	0.057	2.4

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l[3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
	of hexachlorocyclopentadiene in the production of chlordane.	diene			
K035	Wastewater treatment sludges generated in the production of creosote.	Acenaphthene	83-32-9	NA	3.4
		Anthracene	120-12-7	NA	3.4
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Chrysene	218-01-9	0.059	3.4
		o-Cresol	95-48-7	0.11	5.6
		m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6
		p-Cresol (difficult to distinguish from m-cresol)	106-44-5	0.77	5.6
		Dibenz(a,h)anthracene	53-70-3	NA	8.2
		Fluoranthene	206-44-0	0.068	3.4
		Fluorene	86-73-7	NA	3.4
		Indeno(1,2,3-cd)pyrene	193-39-5	NA	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
K036	Still bottoms from toluene reclamation distillation in the production of disulfoton.	Disulfoton	298-04-4	0.017	6.2
K037	Wastewater treatment sludges from the production of disulfoton.	Disulfoton	298-04-4	0.017	6.2
		Toluene	108-88-3	0.080	10
K038	Wastewater from the washing and stripping of phorate production.	Phorate	298-02-2	0.021	4.6
K039	Filter cake from the filtration of diethylphosphorodithioc acid in the production of phorate.	NA	NA	CARBN; or CMBST	CMBST
K040	Wastewater treatment sludge from the production of phorate.	Phorate	298-02-2	0.021	4.6
K041	Wasteater treatment sludge from the production of toxaphene.	Toxaphene	8001-35-2	0.0095	2.6
K042	Heavy ends of distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.	o-Dichlorobenzene	95-50-1	0.088	6.0
		p-Dichlorobenzene	106-46-7	0.090	6.0
		Pentachlorobenzene	608-93-5	0.055	10
		1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l[3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		1,2,4-Trichlorobenzene	120-82-1	0.055	19
K043	2,6-Dichlorophenol waste from the production of 2,4-D.	2,4-Dichlorophenol	120-83-2	0.044	14
		2,6-Dichlorophenol	187-65-0	0.044	14
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
		2,3,4,6-Tetrachlorophenol	58-90-2	0.030	7.4
		Pentachlorophenol	87-86-5	0.089	7.4
		Tetrachloroethylene	127-18-4	0.056	6.0
		HxCDDs (All Hexachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (All Hexachlorodibenzo-furans)	NA	0.000063	0.001
		PeCDDs (All Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (All Pentachlorodibenzo-furans)	NA	0.000035	0.001
		TCDDs (All Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (All Tetrachlorodibenzo-furans)	NA	0.000063	0.001
K044	Wastewater treatment sludges from the manufacturing and processing of explosives.	NA	NA	DEACT	DEACT
K045	Spent carbon from the treatment of wastewater containing explosives.	NA	NA	DEACT	DEACT
K046	Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.	Lead	.7439-92-1	0.69	0.37 mg/l TCLP
K047	Pink/red water from TNT operations	NA	NA	DEACT	DEACT
K048	Dissolved air flotation (DAF) float from the petroleum refining	Benzene	71-43-2	0.14	10
		Benzo(a)pyrene	50-32-8	0.061	3.4

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l[3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
	industry.	bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
		Chrysene	218-01-9	0.059	3.4
		Di-n-butyl phthalate	84-74-2	0.057	28
		Ethylbenzene	100-41-4	0.057	10
		Fluorene	86-73-7	0.059	NA
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-33	0.080	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Cyanides (total)7	57-12-5	1.2	590
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	5.0 mg/l TCLP
K049	Slop oil emulsion solids from the petroleum refining industry.	Anthracene	120-12-7	0.059	3.4
		Benzene	71-43-2	0.14	10
		Benzo(a)pyrene	50-32-8	0.061	3.4
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
		Carbon disulfide	75-15-0	3.8	NA
		Chrysene	2218-01-9	0.059	3.4
		2,4-Dimethylphenol	105-67-9	0.036	NA
		Ethylbenzene	100-41-4	0.057	10
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.080	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Cyanides (Total)[7]	57-12-5	1.2	590
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	5.0 mg/l TCLP
K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry.	Benzo(a)pyrene	50-32-8	0.061	3.4
		Phenol	108-95-2	0.039	6.2
		Cynides (Total)[7]	57-12-5	1.2	590
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	5.0 mg/l TCLP

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l[3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
K051	API separator sludge from the petroleum refining industry.	Acenaphthene	83-32-9	0.059	NA
		Anthracene	120-12-7	0.059	3.4
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzene	71-43-2	0.14	10
		Benzo(a)pyrene	50-32-8	0.061	3.4
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
		Chrysene	2218-01-9	0.059	3.4
		Di-n-butyl phthalate	105-67-9	0.057	28
		Ethylbenzene	100-41-4	0.057	10
		Fluorene	86-73-7	0.059	NA
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.08	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Cyanides (Total)[7]	57-12-5	1.2	590
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	5.0 mg/1 TCLP

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
K052	Tank bottoms (leaded) from the petroleum refining industry.	Benzene	71-43-2	0.14	10
		Benzo(a)pyrene	50-32-8	0.061	3.4
		o-Cresol	95-48-7	0.11	5.6
		m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6
		p-Cresol (difficult to distinguish from m-cresol)	106-44-5	0.77	5.6
		2,4-Dimethylphenol	105-67-9	0.036	NA
		Ethylbenzene	100-41-4	0.057	10
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Toluene	108-88-3	0.08	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Chromium (Total)	7440-47-3	2.77	0.86 mg. TCLP
		Cyanides (Total)7	57-12-5	1.2	590
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	5.0 mg/l TCLP
K060	Ammonia still lime sludge from coking operations.	Benzene	71-43-2	0.14	10
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Cyanides (Total)7	57-12-5	1.2	590
K061	Emission control dust/sludge from the primary production of steel in electric furnaces.	Antimony	7440-36-0	NA	2.1 mg/l TCLP
		Arsenic	7440-38-2	NA	5.0 mg/l TCLP
		Barium	7440-39-3	NA	7.6 mg/l TCLP
		Beryllium	7440-41-7	NA	0.014 mg/l TCLP
		Cadmium	7440-43-9	0.69	0.19 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
		Mercury	7439-97-6	NA	0.025 mg/l TCLP
		Nickel	7440-02-0	3.98	5.0 mg/l TCLP
		Selenium	7782-49-2	NA	0.16 mg/l TCLP
		Silver	7440-22-4	NA	0.30 mg/l TCLP
		Thallium	7440-28-0	NA	0.078 mg/l TCLP
		Zinc	7440-66-6	NA	5.3 mg/l TCLP
K062	Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry	Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
		Nickel	7440-02-0	3.98	NA

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
	(SIC Codes 331 and 332).				
K069	Emission control dust/sludge from secondary lead smelting. - Calcium Sulfate (Low Lead) Subcategory	Cadmium Lead	7440-43-9 7439-92-1	0.69 0.69	0.19 mg/l TCLP 0.37 mg/l TCLP
	Emission control dust/sludge from secondary lead smelting. - Non-Calcium Sulfate (High Lead) Subcategory.	NA	NA	NA	RLEAD
K071	K071 (Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used) nonwastewaters that are residues from RMERC.	Mercury	7439-97-6	NA	0.20 mg/l TCLP
	K071 (Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.) nonwastewaters that are not residues from RMERC.	Mercury	7439-97-6	NA	0.025 mg/l TCLP
	All K071 wastewaters.	Mercury	7439-97-6	0.15	NA
K073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.	Carbon tetrachloride Chloroform Hexachlorethane Tetrachloroethylene 1,1,1-Trichloroethane	56-23-5 67-66-3 67-72-1 127-18-4 71-55-6	0.057 0.046 0.055 0.056 0.054	6.0 6.0 30 6.0 6.0
K083	Distillation bottoms from aniline production.	Aniline Benzene Cyclohexanone Diphenylamine (difficult to distinguish from diphenylnitrosamine)	62-53-3 71-43-2 108-94-1 122-39-4	0.81 0.14 0.36 0.92	14 10 NA 13
		Diphenylnitrosamine (difficult to distinguish from diphenylamine)	86-30-6	0.92	13
		Nitrobenzene Phenol Nickel	98-95-3 108-95-2 7440-02-0	0.068 0.039 3.98	14 6.2 5.0 mg/l TCLP

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes.	Benzene	71-43-2	0.14	10
		Chlorobenzene	108-90-7	0.057	6.0
		m-Dichlorobenzene	541-73-1	0.036	6.0
		o-dichlorobenzene	95-50-1	0.088	6.0
		p-Dichlorobenzene	106-46-7	0.090	6.0
		Hexachlorobenzene	118-74-1	0.055	10
		Total PCBs (sum of all PCB isomers, or all Aroclors)	1336-36-3	0.10	10
		Pentachlorobenzene	.608-93-5	0.055	10
		1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14
		1,2,4-Trichlorobenzene	120-82-1	0.055	19
K086	Solvent wastes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stablilizers containing chromium and lead.	Acetone	67-64-1	0.28	160
		Acetophenone	96-86-2	0.010	9.7
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
		n-Butyl alcohol	71-36-3	5.6	2.6
		Butylbenzyl phthalate	85-68-7	0.017	28
		Cyclohexanone	108-94-1	0.36	NA
		o-Dichlorobenzene	95-50-1	0.088	6.0
		Diethyl phthalate	84-66-2	0.20	28
		Dimethyl phthalate	131-11-3	0.047	28
		Di-n-butyl phthalate	84-74-2	0.057	28
		Di-n-octyl phthalate	117-84-0	0.017	28
		Ethyl acetate	141-78-6	0.34	33
		Ethylbenzene	100-41-4	0.057	10
		Methanol	67-56-1	5.6	NA
		Methyl ethyl ketone	78-93-3	0.28	36
		Methyl Isobutyl ketone	108-10-1	0.14	33
		Methylene chloride	75-09-2	0.089	30
		Naphthalene	91-20-3	0.059	5.6
		Nitrobenzene	98-95-3	0.068	14
		Toluene	108-88-3	0.080	10
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
		Trichloroethylene	79-01-6	0.054	6.0
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene	1330-20-7	0.32	30

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		concentrations)			
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
K087	Decanter tank tar sludge from coking operations.	Acenaphthylene	208-96-8	0.059	3.4
		Benzene	71-43-2	0.14	10
		Chrysene	218-01-9	0.059	3.4
		Fluoranthene	206-44-0	0.068	3.4
		Indeno (1,2,3-cd) pyrene	193-39-5	0.0055	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Toluene	108-88-3	0.080	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
K088	Spent potliners from primary aluminum reduction.	Acenaphthene	83-32-9	0.059	3.4
		Anthracene	120-12-7	0.059	3.4
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluoranthene	205-99-2	0.11	6.8
		Benzo(k)fluoranthene	207-08-9	0.11	6.8
		Benzo(g.h.i)perylene	191-24-2	0.0055	1.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Fluoranthene	206-44-0	0.068	3.4
		Indeno (1,2,3-c-d)pyrene	193-39-5	0.0055	3.4
		Phenanthrene	85-01-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Antimony	7440-36-0	1.9	2.1 mg/l TCLP
		Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
		Barium	7440-39-3	1.2	7.6 mg/l TCLP
		Beryllium	7440-41-7	0.82	0.014 mg/l TCLP
		Cadmium	7440-43-9	0.69	0.19 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
		Mercury	7439-97-6	0.15	0.025 mg/l TCLP
		Nickel	7440-02-0	3.98	5.0 mg/l TCLP
		Selenium	7782-49-2	0.82	0.16 mg/l TCLP
		Silver	7440-22-4	0.43	0.30 mg/l TCLP
		Cyanide (Total)	57-12-5	1.2	590
		Cyanide (Amenable)	57-12-5	0.86	30
		Fluoride	16984-48-8	35	48 mg/l TCLP

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene.	Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	100-21-0	0.055	28
		Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	85-44-9	0.055	28
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene.	Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	100-21-0	0.055	28
		Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	85-44-9	0.055	28
K095	Distillation bottoms from the production of 1,1,1-trichloroethane.	Hexachloroethane	67-72-1	0.055	30
		Pentachloroethane	76-01-7	0.055	6.0
		1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethylene	127-18-4	0.056	6.0
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		Trichloroethylene	79-01-6	0.054	6.0
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.	m-Dichlorobenzene	541-73-1	0.036	6.0
		Pentachloroethane	76-01-7	0.055	6.0
		1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethylene	127-18-4	0.056	6.0
		1,2,4-Trichlorobenzene	120-82-1	0.055	19
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		Trichloroethylene	79-01-6	0.054	6.0
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.	Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
		Heptachlor	76-44-8	0.0012	0.066
		Heptachlor epoxide	1024-57-3	0.016	0.066
		Hexachlorocyclopenta-diene	77-47-4	0.057	2.4
K098	Untreated process wastewater from the	Toxaphene	8001-35-2	0.0095	2.6

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
	production of toxaphene.				
K099	Untreated wastewater from the production of 2,4-D.	2,4-Dichlorophenoxy-acetic acid	94-75-7	0.72	10
		HxCDDs (All Hexachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (All Hexachlorodibenzo-furans)	NA	0.000063	0.001
		PeCDDs (All Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (All Pentachlorodibenzo-furans)	NA	0.000035	0.001
		TCDDs (All Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (All Tetrachlorodibenzo-furans)	NA	0.000063	0.001
K100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.	Cadmium	7440-43-9	0.69	0.19 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
		Lead	7439-92-1	0.69	0.37 mg/L TCLP
K101	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	o-Nitroaniline	88-74-4	0.27	14
		Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
		Cadmium	7440-43-9	0.69	NA
		Lead	7439-92-1	0.69	NA
		Mercury	7439-97-6	0.15	NA
K102	Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	o-Nitrophenol	88-75-5	0.028	13
		Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
		Cadmium	7440-43-9	0.69	NA
		Lead	7439-92-1	0.69	NA
		Mercury	7439-97-6	0.15	NA
K103	Process residues from aniline extraction from the production of aniline.	Aniline	62-53-3	0.81	14
		Benzene	71-43-2	0.14	10
		2,4-Dinitrophenol	51-28-5	0.12	160
		Nitrobenzene	98-95-3	0.068	14
		Phenol	108-95-2	0.039	6.2
K104	Combined wastewater streams generated from nitrobenzene/aniline production.	Aniline	62-53-3	0.81	14
		Benzene	71-43-2	0.14	10

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		2,4-Dinitrophenol	51-28-5	0.12	160
		Nitrobenzene	98-95-3	0.068	14
		Phenol	108-95-2	0.039	6.2
		Cyanides (Total)7	57-12-5	1.2	590
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.	Benzene	71-43-2	0.14	10
		Chlorobenzene	108-90-7	0.057	6.0
		2-Chlorophenol	95-57-8	0.044	5.7
		o-Dichlorobenzene	95-50-1	0.088	6.0
		p-Dichlorobenzene	106-46-7	0.090	6.0
		Phenol	108-95-2	0.039	6.2
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
K106	K106 (wastewater treatment sludge from the mercury cell process in chlorine production) nonwastewaters that contain greater than or equal to 260 mg/kg total mercury.	Mercury	7439-97-6	NA	RMERC
	K106 (wastewater treatment sludge from the mercury cell process in chlorine production) nonwastewaters that contain less than 260 mg/kg total mercury that are residues from RMERC.	Mercury	7439-97-6	NA	0.20 mg/l TCLP
	Other K106 nonwastewaters that contain less than 260 mg/kg total mercury and are not residues from RMERC.	Mercury	7439-97-6	NA	0.025 mg/l TCLP
	All K106 wastewaters	Mercury	7439-97-6	0.15	NA
K107	Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	NA	NA	CMBST; or CHOXD fb CARBN; or BIODG fb CARBN	CMBST
K108	Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	NA	NA	CMBST; or CHOXD fb CARBN; or BIODG fb CARBN	CMBST
K109	Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	NA	NA	CMBST; or CHOXD fb CARBN; or BIODG fb CARBN	CMBST

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
K110	Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	NA	NA	CMBST; or CHOXD fb CARBN; or BIODG fb CARBN	CMBST
K111	Product washwaters from the production of dinitrotoluene via nitration of toluene.	2,4-Dinitrotoluene 2,6-Dinitrotoluene	121-1-2 606-20-2	0.32 0.55	140 28
K112	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.	NA	NA	CMBST; or CHOXD fb CARBN;or BIODG fb CARBN	CMBST
K113	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydro-genation of dinitrotoluene.	NA	NA	CARBN; or CMBST	CMBST
K114	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	NA	NA	CARBN; or CMBST	CMBST
K115	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	Nickel NA	7440-02-0 NA	3.98 CARBN; or CMBST	5.0 mg/l TCLP CMBST
K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.	NA	NA	CARBN; or CMBST	CMBST
K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.	Methyl bromide (Bromomethane) Chloroform Ethylene dibromide (1,2-Dibromoethane)	74-83-9 67-66-3 106-93-4	0.11 0.046 0.028	15 6.0 15
K118	Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	Methyl bromide (Bromomethane) Chloroform Ethylene dibromide (1,2-Dibromoethane)	74-83-9 67-66-3 106-93-4	0.11 0.046 0.028	15 6.0 15

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
K123	Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts.	NA	NA	CMBST; or CHOXD fb (BIODG or CARBN)	CMBST
K124	Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts.	NA	NA	CMBST; or CHOXD fb (BIODG or CARBN)	CMBST
K125	Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.	NA	NA	CMBST; or CHOXD fb (BIODG or CARBN)	CMBST
K126	Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts.	NA	NA	CMBST; or CHOXD fb (BIODG or CARBN)	CMBST
K131	Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide.	Methyl bromide (Bromomethane)	74-83-9	0.11	15
K132	Spent absorbent and wastewater separator solids from the production of methyl bromide.	Methyl bromide (Bromomethane)	74-83-9	0.11	15
K136	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethane.	Methyl bromide (Bromomethane) Chloroform Ethylene dibromide (1,2-Dibromoethane)	74-83-9 67-66-3 106-93-4	0.11 0.046 0.028	15 6.0 15
K141	Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke or the recovery of coke by-products produced from coal.	Benzene Benz(a)anthracene Benzo(a)pyrene	71-43-2 56-55-3 50-2-8	0.14 0.059 0.061	10 3.4 3.4
	This listing does not include K087 (decanter tank tar sludge from coking operations).	Benzo(b)fluoranthene (difficult to distinguish from benzo (k)fluoranthene)	205-99-2	0.11	6.8
		Benzo(k)fluoranthene	207-08-9	0.11	6.8

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		(difficult to distinguish from benzo (b)fluoranthene)			
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Indeno (1,2,3-cd)pyrene	193-39-5	0.0055	3.4
K142	Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal.	Benzene	71-43-2	0.14	10
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluoranthene (difficult to distinguish from benzo (k)fluoranthene)	205-99-2	0.11	6.8
		Benzo(k)fluoranthene (difficult to distinguish from benzo (b)fluoranthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Indeno(1,2,3-cd)pyrene	193-39-5	0.0055	3.4
K143	Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal.	Benzene	71-43-2	0.14	10
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluoranthene (difficult to distinguish from benzo (k)fluoranthene)	205-99-2	0.11	6.8
		Benzo(k)fluoranthene (difficult to distinguish from benzo (b)fluoranthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4
K144	Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal.	Benzene	71-43-2	0.14	10
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluoranthene (difficult to distinguish from benzo (k)fluoranthene)	205-99-2	0.11	6.8
		Benzo(k)fluoranthene (difficult to distinguish from benzo (b)fluoranthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
K145	Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.	Benzene	71-43-2	0.14	10
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Naphthalene	91-20-3	0.059	5.6
K147	Tar storage tank residues from coal tar refining.	Benzene	71-43-2	0.14	10
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluoranthene (difficult to distinguish from benzo (k)fluoranthene)	205-99-2	0.11	6.8
		Benzo(k)fluoranthene (difficult to distinguish from benzo (b)fluoranthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Indeno(1,2,3-cd)pyrene	193-39-5	0.0055	3.4
K148	Residues from coal tar distillation, including, but not limited to, still bottoms.	Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluoranthene (difficult to distinguish from benzo (k)fluoranthene)	205-99-2	0.11	6.8
		Benzo(k)fluoranthene (difficult to distinguish from benzo (b)fluoranthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Indeno(1,2,3-cd)pyrene	193-39-5	0.0055	3.4
K149	Distillation bottoms from the production of alpha-(or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. (This waste does not include still bottoms from the distillation of benzyl chloride.)	Chlorobenzene	108-90-7	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Chloromethane	74-87-3	0.19	30
		p-Dichlorobenzene	106-46-7	0.090	6.0
		Hexachlorobenzene	118-74-1	0.055	10
		Pentachlorobenzene	608-93-5	0.055	10
		1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14
		Toluene	108-88-3	0.080	10

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
K150	Organic residues, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha-(or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Chloromethane	74-87-3	0.19	30
		p-Dichlorobenzene	106-46-7	0.090	6.0
		Hexachlorobenzene	118-74-1	0.055	10
		Pentachlorobenzene	608-93-5	0.055	10
		1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14
		1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0
		Tetrachloroethylene	127-18-4	0.056	6.0
		1,2,4-Trichlorobenzene	120-82-1	0.055	19
K151	Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	Benzene	71-43-2	0.14	10
		Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Hexachlorobenzene	118-74-1	0.055	10
		Pentachlorobenzene	608-93-5	0.055	10
		1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14
		Tetrachloroethylene	127-18-4	0.056	6.0
		Toluene	108-88-3	0.080	10
K156	Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes.	Acetonitrile	75-05-8	5.6	38
		Acetophenone	96-86-2	0.010	9.7
		Aniline	62-53-3	0.81	14
		Benomyl	17804-35-2	0.056	1.4
		Benzene	71-43-2	0.14	10
		Carbaryl	63-25-2	0.006	0.14
		Carbenzadim	10605-21-7	0.056	1.4
		Carbofuran	1563-66-2	0.006	0.14
		Carbosulfan	55285-14-8	0.028	1.4
		Chlorobenzene	108-90-7	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		o-Dichlorobenzene	95-50-1	0.088	6.0
		Methomyl	16752-77-5	0.028	0.14
		Methylene chloride	75-09-2	0.089	30
		Methyl ethyl ketone	78-93-3	0.28	36
		Naphthalene	91-20-3	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyridine	110-86-1	0.014	16
		Toluene	108-88-3	0.080	10
		Triethylamine	121-44-8	0.081	1.5
K157	Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes.	Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Chloromethane	74-87-3	0.19	30
		Methomyl	16752-77-5	0.028	0.14
		Methylene chloride	75-09-2	0.089	30
		Methyl ethyl ketone	78-93-3	0.28	36

Treatment Standards For Hazardous Wastes

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		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		o-Phenylenediamine	95-54-5	0.056	5.6
		Pyridine	110-86-1	0.014	16
		Triethylamine	121-44-8	0.081	1.5
K158	Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes.	Benomyl	17804-35-2	0.056	1.4
		Benzene	71-43-2	0.14	10
		Carbenzadim	10605-21-7	0.056	1.4
		Carbofuran	1563-66-2	0.006	0.14
		Carbosulfan	55285-14-8	0.028	1.4
		Chloroform	67-66-3	0.046	6.0
		Methylene chloride	75-09-2	0.089	30
		Phenol	108-95-2	0.039	6.2
K159	Organics from the treatment of thiocarbamate wastes.	Benzene	71-43-2	0.14	10
		Butylate	2008-41-5	0.042	1.4
		EPTC (Eptam)	759-94-4	0.042	1.4
		Molinate	2212-67-1	0.042	1.4
		Pebulate	1114-71-2	0.042	1.4
		Vernolate	1929-77-7	0.042	1.4
K161	Purification solids (including filtration, evaporation, and centrifugation solids), baghouse dust and floor sweepings from the production of dithiocarbamate acids and their salts.	Antimony	7440-36-0	1.9	2.1 mg/l TCLP
		Arsenic	7440-38-2	1.9	5.0 mg/l TCLP
		Carbon disulfide	75-15-0	3.8	4.8 mg/l TCLP
		Dithiocarbamates, (Total)	NA	0.028	28
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
		Nickel	7440-02-0	3.98	5.0 mg/l TCLP
		Selenium	7782-49-2	0.82	016 mg/l TCLP
P001	Warfarin, & salts, when present at concentrations greater than 0.3%.	Warfarin	81-81-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P002	1-Acetyl-2-thiourea	1-Acetyl-2-thiourea	591-08-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P003	Acrolein	Acrolein	107-02-8	0.29	CMBST
P004	Aldrin	Aldrin	309-00-2	0.021	0.066
P005	Allyl alcohol	Allyl alcohol	107-18-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P006	Aluminum phosphide	Aluminum phosphide	20859-73-8	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
P007	5-Aminomethyl 3-isoxazolol	5-Aminomethyl 3-isoxazolol	2763-96-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P008	4-Aminopyridine	4-Aminopyridine	504-24-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P009	Ammonium picrate	Ammonium picrate	131-74-8	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
P010	Arsenic acid	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
P011	Arsenic pentoxide	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
P012	Arsenic trioxide	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
P013	Barium cyanide	Barium	7440-39-3	NA	7.6 mg/l TCLP
			57-12-5	1.2	590

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		Cyanides (Total)[7]	57-12-5	0.86	30
		Cyanides (Amenable)[7]			
P014	Thiophenol (Benzene thiol)	Thiophenol (Benzene thiol)	108-98-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P015	Beryllium dust	Beryllium	7440-41-7	RMETL; or RTHRM	RMETL; or RTHRM
P016	Dichloromethyl ether (Bis (chloromethyl) ether)	Dichloromethyl ether	542-88-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P017	Bromoacetone	Bromoacetone	598-31-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P018	Brucine	Brucine	357-57-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P020	2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	88-85-7	0.066	2.5
P021	Calcium cyanide	Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
P022	Carbon disulfide	Carbon disulfide	75-15-0	3.8	CMBST
		Carbon disulfide; alternate[6] standard for nonwastewaters only	75-15-0	NA	4.8 mg/l TCLP
P023	Chloroacetaldehyde	Chloroacetaldehyde	107-20-0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P024	p-Chloroaniline	p-Chloroaniline	106-47-8	0.46	16
P026	1-(o-Chlorophenyl)thiourea	1-(o-Chlorophenyl) thiourea	5344-82-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P027	3-Chloropropionitrile	3-Chloropropionitrile	542-76-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P028	Benzyl chloride	Benzyl chloride	100-44-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P029	Copper cyanide	Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
P030	Cyanides (soluble salts and complexes)	Cyanides (Total) [7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
P031	Cyanogen	Cyanogen	460-19-5	CHOXD; WETOX; or CMBST	CHOXD; WETOX; or CMBST
P033	Cyanogen chloride	Cyanogen chloride	506-77-4	CHOXD; WETOX; or CMBST	CHOXD; WETOX; or CMBST
P034	2-Cyclohexyl-4,6-dinitrophenol	2-Cyclohexyl-4,6-dinitrophenol	131-89-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P036	Dichlorophenylarsine	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
P037	Dieldrin	Dieldrin	60-57-1	0.017	0.13
P038	Diethylarsine	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
P039	Disulfoton	Disulfoton	298-04-4	0.017	6.2

Treatment Standards for Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
P040	O'O-Diethyl O-pyrazinyl phosphorothioate	O,O-Diethyl O-pyrazinyl phosphorothioate	297-97-2	CARBN; or CMBST	CMBST
P041	Diethyl-p-nitrophenyl phosphate	Diethyl-p-nitrophenyl phosphate	311-45-5	CARBN; or CMBST	CMBST
P042	Epinephrine	Epinephrine	51-43-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P043	Diisopropylfluorophosphate (DFP)	Diisopropylfluorophosphate (DFP)	55-91-4	CARBN; or CMBST	CMBST
P044	Dimethoate	Dimethoate	60-51-5	CARBN; or CMBST	CMBST
P045	Thiofanox	Thiofanox	39196-18-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P046	alpha, alpha-Dimethylphenethylamine	alpha, alpha-Dimethylphenethylamine	122-09-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P047	4,6-Dinitro-o-cresol	4,6-Dinitro-o-cresol	543-52-1	0.28	160
	4,6-Dinitro-o-cresol salts	NA	NA	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P048	2,4-Dinitrophenol	2,4-Dinitrophenol	51-28-5	0.12	160
P049	Dithiobiuret	Dithiobiuret	541-53-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P050	Endosulfan	Endosulfan I	939-98-8	0.023	0.066
		Endosulfan II	33213-6-5	0.029	0.13
		Endosulfan sulfate	1031-07-8	0.029	0.13
P051	Endrin	Endrin	72-20-8	0.0028	0.13
		Endrin aldehyde	7421-93-4	0.025	0.13
P054	Aziridine	Aziridine	151-56-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P056	Fluorine	Fluoride (measured in wastewaters only)	16964-48-8	35	ADGAS fb NEUTR
P057	Fluoroacetamide	Fluoroacetamide	640-19-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P058	Fluoroacetic acid, sodium salt	Fluoroacetic acid, sodium salt	62-74-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P059	Heptachlor	Heptachlor	76-44-8	0.0012	0.066
		Heptachlor epoxide	1024-57-3	0.016	0.066
P060	Isodrin	Isodrin	465-73-6	0.021	0.066
P062	Hexaethyl tetraphosphate	Hexaethyl tetraphosphate	757-58-4	CARBN; or CMBST	CMBST
P063	Hydrogen cyanide	Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
P064	Isocyanic acid, ethyl ester	Isocyanic acid, ethyl ester	624-83-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P065	Mercury fulminate nonwastewaters, regardless of their total mercury content, that are not CMBSTerator residues or are not residues from RMERC.	Mercury	7439-97-6	NA	IMERC

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
	Mercury fulminate nonwastewaters that are either CMBSTerator residues or are residues from RMERC; and contain greater than or equal to 260 mg/kg total mercury.	Mercury	7339-97-6	NA	RMERC
	Mercury fulminate nonwastewaters that are residues from RMERC and contain less than 260 mg/kg total mercury.	Mercury	7439-97-6	NA	0.20 mg/l TCLP
	Mercury fulminate nonwastewaters that are CMBSTerator residues and contain less than 260 mg/kg total mercury.	Mercury	7439-97-6	NA	0.025 mg/l TCLP
	All Mercury fulminate wastewaters.	Mercury	7439-97-6	0.15	NA
P066	Methomyl	Methomyl	16752-77-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P067	2-Methyl-aziridine	2-Methyl-aziridine	75-55-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P068	Methyl hydrazine	Methyl hydrazine	60-34-4	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
P069	2-Methyllactonitrile	2-Methyllactonitrile	75-86-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P070	Aldicarb	Aldicarb	116-06-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P071	Methyl parathion	Methyl parathion	298-00-0	0.014	4.6
P072	1-Naphthyl-2-thiourea	1-Naphthyl-2-thiourea	86-88-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P073	Nickel carbonyl	Nickel	7440-02-0	3.98	5.0 mg/l TCLP
P074	Nickel cyanide	Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
		Nickel	7440-02-0	3.98	5.0 mg/l TCLP
P075	Nicotine and salts	Nicotine and salts	54-11-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P076	Nitric oxide	Nitric oxide	10102-43-9	ADGAS	ADGAS
P077	p-Nitroaniline	p-Nitroaniline	100-01-6	0.028	28
P078	Nitrogen dioxide	Nitrogen dioxide	10102-44-0	ADGAS	ADGAS
P081	Nitroglycerin	Nitroglycerin	55-63-0	CHOXD CHRED;CARBN; BIODG or CMBST	CHOXD; CHRED; or CMBST
P082	N-Nitrosodimethylamine	N-Nitrosodimethylamine	62-75-9	0.40	2.3
P084	N-Nitrosomethylvinylamine	N-Nitrosomethylviny-lamine	4549-40-0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P085	Octamethylpyrophosphoramide	Octamethylpyrophos-phoramide	152-16-9	CARBN; or CMBST	CMBST
P087	Osmium tetroxide	Osmium tetroxide	20816-12-0	RMETL; or RTHRM	RMETL; or RTHRM
P088	Endothall	Endothall	145-73-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P089	Parathion	Parathion	56-38-2	0.014	4.6
P092	Phenyl mercuric acetate	Mercury	7439-97-6	NA	IMERC; or RMERC

Treatment Standards for Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
	nonwastewaters, regardless of their total mercury content, that are not CMBSTerator residues or are not residues from RMERC.	Mercury	7439-97-6	NA	RMERC
	Phenyl mercuric acetate nonwastewaters that are either CMBSTerator residues or are residues from RMERC; and still contain greater than or equal to 260 mg/kg total mercury.	Mercury	7439-97-6	NA	0.20 mg/l TCLP
	Phenyl mercuric acetate nonwastewaters that are residues from RMERC and contain less than 260 mg/kg total mercury.	Mercury	7439-97-6	NA	0.025 mg/l TCLP
	Phenyl mercuric acetate nonwastewaters that are CMBSTerator residues and contain less than 260 mg/kg total mercury.	Mercury	7439-97-6	0.15	NA
	All phenyl mercuric acetate wastewaters.				

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
P093	Phenylthiourea	Phenylthiourea	103-85-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P094	Phorate	Phorate	298-02-2	0.021	4.6
P095	Phosgene	Phosgene	75-44-5	(WETOX or CHOXD fb CARBN; or CMBST	CMBST
P096	Phosphine	Phosphine	7803-51-2	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
P097	Famphur	Famphur	52-85-7	0.017	15
P098	Potassium cyanide	Cyanides (Total) [7]	57-12-5	1.2	590
		Cyanides (Amenable) [7]	57-12-5	0.86	30
P099	Potassium silver cyanide	Cyanides (Total) [7]	57-12-5	1.2	590
		Cyanides (Amenable) [7]	57-12-5	0.86	30
		Silver	7440-22-4	0.43	0.30 mg/l TCLP
P101	Ethyl cyanide (Propanenitrile)	Ethyl cyanide (Propanenitrile)	107-12-0	0.24	360
P102	Propargyl alcohol	Propargyl alcohol	107-19-7	(WETOX or CHOXD fb CARBN; or CMBST	CMBST
P103	Selenourea	Selenium	7782-49-2	0.82	0.16 mg/l TCLP
P104	Silver cyanide	Cyanides (Total) [7]	57-12-5	1.2	590
		Cyanides (Amenable) [7]	57-12-5	0.86	30
		Silver	7440-22-4	0.43	0.30 mg/l TCLP
P105	Sodium azide	Sodium azide	26628-22-8	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
P106	Sodium cyanide	Cyanides (Total) [7]	57-12-5	1.2	590
		Cyanides (Amenable) [7]	57-12-5	0.86	30
P108	Strychnine and salts	Strychnine and salts	57-24-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P109	Tetraethyldithiopyrophosphate	Tetraethyldithiopyro-phosphate	3689-24-5	CARBN; or CMBST	CMBST
P110	Tetraethyl lead	Lead	7439-92-1	0.69	0.37 mg/l TCLP
P111	Tetraethylpyrophosphate	Tetraethylpyrophos-phate	107-49-3	CARBN; or CMBST	CMBST
P112	Tetranitromethane	Tetranitromethane	509-14-8	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
P113	Thallic oxide	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
P114	Thallium selenite	Selenium	7782-49-2	0.82	0.16 mg/l TCLP
P115	Thallium (I) sulfate	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
P116	Thiosemicarbazide	Thiosemicarbazide	79-19-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P118	Trichloromethanethiol	Trichloromethanethiol	75-70-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P119	Ammonium vanadate	Vanadium (measured in wastewaters only)	7440-62-2	4.3	STABL
P120	Vanadium pentoxide	Vanadium (measured in wastewaters only)	7440-62-2	4.3	STABL

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
P121	Zinc cyanide	Cyanides (Total) [7] Cyanides (Amenable) [7]	57-12-5 57-12-5	1.2 0.86	590 30
P122	Zinc phosphide Zn_3P_2, when present at concentrations greater than 10%	Zinc Phosphide	1314-84-7	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
P123	Toxaphene	Toxaphene	8001-35-2	0.0095	2.6
P127	Carbofuran [10]	Carbofuran	1563-66-2	0.006	0.14
P128	Mexacarbate [10]	Mexacarbate	315-18-4	0.056	1.4
P185	Tirpate [10]	Tirpate	26419-73-8	0.056	0.28
P188	Physostigimine salicylate [10]	Physostigmine salicylate	57-64-7	0.056	1.4
P189	Carbosulfan [10]	Carbosulfan	55285-14-8	0.028	1.4
P190	Metolcarb [10]	Metolcarb	1129-41-5	0.056	1.4
P191	Dimetilan [10]	Dimetilan	644-64-4	0.056	1.4
P192	Isolan [10]	Isolan	119-38-0	0.056	1.4
P193	Thiophanate-methyl	Thiophanate-methyl	23564-05-8	0.056	1.4
P194	Oxamyl [10]	Oxamyl	23135-22-0	0.056	0.28
P196	Manganese dimethyldithiocarbamate [10]	Dithiocarbamates (total)	NA	0.028	28
P197	Formparanate [10]	Formparanate	17702-57-7	0.056	1.4
P198	Formetanate hydrochloride [10]	Formetanate hydrochloride	23422-53-9	0.056	1.4
P199	Methiocarb [10]	Methiocarb	2032-65-7	0.056	1.4
P201	Promecarb [10]	Promecarb	2631-37-0	0.056	1.4
P202	m-Cumenyl methylcarbamate [10]	m-Cumenyl methylcarbamate	64-00-6	0.056	1.4
P203	Aldicarb sulfone [10]	Aldicarb sulfone	1646-88-4	0.056	0.28
P204	Physostigmine [10]	Physostigmine	57-47-6	0.056	1.4
P205	Ziram [10]	Dithiocarbamates (total)	NA	0.028	28
U001	Acetaldehyde	Acetaldehyde	75-07-0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U002	Acetone	Acetone	67-64-1	0.28	160
U003	Acetonitrile	Acetonitrile	75-05-8	5.6	CMBST
		Acetonitrile; alternate[6] standard for nonwastewaters only	75-05-8	NA	38
U004	Acetophenone	Acetophenone	98-86-2	0.010	9.7
U005	2-Acetylaminofluorene	2-Acetylaminofluorene	53-96-3	0.059	140
U006	Acetyl chloride	Acetyl Chloride	75-36-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U007	Acrylamide	Acrylamide	79-06-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U008	Acrylic acid	Acrylic acid	79-10-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

Treatment Standards For Hazardous Wastes

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WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
U009	Acrylonitrile	Acrylonitrile	107-13-1	0.24	84
U010	Mitomycin C	Mitomycin C	50-07-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U011	Amitrole	Amitrole	61-82-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U012	Aniline	Aniline	62-53-3	0.81	14
U014	Auramine	Auramine	492-80-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U015	Azaserine	Azaserine	115-02-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U016	Benz(c)acridine	Benz(c)acridine	225-51-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U017	Benzal chloride	Benzal chloride	98-87-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U018	Benz(a)anthracene	Benz(a)anthracene	56-55-3	0.059	3.4
U019	Benzene	Benzene	71-43-2	0.14	10
U020	Benzenesulfonyl chloride	Benzenesulfonyl chloride	98-09-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U021	Benzidine	Benzidine	92-87-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U022	Benzo(a)pyrene	Benzo(a)pyrene	50-32-8	0.061	3.4
U023	Benzotrichloride	Benzotrichloride	98-07-7	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U024	bis-(2-Chloroethoxy)methane	bis-(2-Chloroethoxy) methane	111-91-9	0.036	7.2
U025	bis(2-Chloroethyl)ether	bis(2-Chloroethyl) ether	111-44-4	0.033	6.0
U026	Chlornaphazine	Chlornaphazine	494-03-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U027	bis(2-Chloroisopropyl)ether	bis(2-Chloroisopropyl)ether	39638-32-9	(WETOX or CHOXD) fb CARBN; or CMBST	7.2
U028	bis(2-Ethylhexyl) phthalate	bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
U029	Methyl bromide (Bromomethane)	Methyl bromide (Bromomethane)	74-83-9	0.11	15
U030	4-Bromophenyl phenyl ether	4-Bromophenyl phenyl ether	101-55-3	0.055	15
U031	n-Butyl alcohol	n-Butyl alcohol	71-36-3	5.6	2.6
U032	Calcium chromate	Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
U033	Carbon oxyfluoride	Carbon oxyfluoride	353-50-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U034	Trichloroacetaldehyde (Chloral)	Trichloroacetaldehyde (Chloral)	75-87-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U035	Chlorambucil	Chlorambucil	305-03-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U036	Chlordane	Chlordane (alpha and gama isomers)	57-74-9	0.0033	0.26
U037	Chlorobenzene	Chlorobenzene	108-90-7	0.057	6.0
U038	Chlorobenzilate	Chlorobenzilate	510-15-6	0.10	CMBST

Treatment Standards for Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
U039	p-Chloro-m-cresol	p-Chloro-m-cresol	59-50-7	0.018	14
U041	Epichlorohydrin(1-Chloro-2,3-epoxypropane)	Epichlorohydrin(1-Chloro-2,3-epoxypropane)	106-89-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U042	2-Chloroethyl vinyl ether	2-Chloroethyl vinyl ether	110-75-8	0.062	CMBST
U043	Vinyl chloride	Vinyl chloride	75-01-4	0.27	6.0
U044	Chloroform	Chloroform	67-66-3	0.046	6.0
U045	Chloromethane (Methyl chloride)	Chloromethane (Methyl chloride)	74-87-3	0.19	30
U046	Chloromethyl methyl ether	Chloromethyl methyl ether	107-30-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U047	2-Chloronaphthalene	2-Chloronaphthalene	91-58-7	0.055	5.6
U048	2-Chlorophenol	2-Chlorophenol	95-57-8	0.044	5.7
U049	4-Chloro-o-toluidine hydrochloride	4-Chloro-o-toluidine hydrochloride	3165-93-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U050	Chrysene	Chrysene	218-01-9	0.059	3.4
U051	Creosote	Naphthalene	91-20-3	0.059	5.6
		Pentachlorophenol	87-86-5	0.089	7.4
		Phenanthrene	85-01-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.080	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Lead	7439-92-1	0.69	0.37 mg/l TCLP
U052	Cresols (Cresylic acid)	o-Cresol	95-48-7	0.11	5.6
		m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6
		p-Cresol (difficult to distinguish from m-cresol)	106-44-5	0.77	5.6
		Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations)	1319-77-3	0.88	11.2
U053	Crotonaldehyde	Crotonaldehyde	4170-30-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U055	Cumene	Cumene	98-82-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U056	Cyclohexane	Cyclohexane	110-82-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U057	Cyclohexanone	Cyclohexanone	108-94-1	0.36	CMBST
		Cyclohexanone; alternate [6] standard	108-94-1	NA	0.75 mg/l TCLP

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
		for nonwastewaters only			
U058	Cyclophosphamide	Cyclophosphamide	50-18-0	CARBN; or CMBST	CMBST
U059	Daunomycin	Daunomycin	20830-81-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U060	DDD	o,p'-DDD	53-19-0	0.023	0.087
		p,p'-DDD	72-54-8	0.023	0.087
U061	DDT	o,p'-DDT	789-02-6	0.0039	0.087
		p,p'-DDT	50-29-3	0.0039	0.087
		o,p'-DDD	53-19-0	0.023	0.087
		p,p'-DDD	72-54-8	0.023	0.087
		o,p'-DDE	3424-82-6	0.031	0.087
		p,p'-DDE	72-55-9	0.031	0.087
U062	Diallate	Diallate	2303-16-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U063	Dibenz(a,h)anthracene	Dibenz(a,h)anthracene	53-70-3	0.055	8.2
U064	Dibenz(a,i)pyrene	Dibenz(a,i)pyrene	189-55-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U066	1,2-Dibromo-3-chloropropane	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15
U067	Ethylene dibromide (1,2-Dibromoethane)	Ethylene dibromide (1,2-Dibromoethane)	106-93-4	0.028	15
U068	Dibromomethane	Dibromomethane	74-95-3	0.11	15
U069	Di-n-butyl phthalate	Di-n-butyl phthalate	84-74-2	0.057	28
U070	o-Dichlorobenzene	o-Dichlorobenzene	95-50-1	0.088	6.0
U071	m-Dichlorobenzene	m-Dichlorobenzene	541-73-1	0.036	6.0
U072	p-Dichlorobenzene	p-dichlorobenzene	106-46-7	0.090	6.0
U073	3,3'-Dichlorobenzidine	3,3'-Dichlorobenzidine	91-94-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U074	1,4-Dichloro-2-butene	cis-1,4-Dichloro-2-butene	1476-11-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
		trans-1,4-Dichloro-2-butene	764-41-0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U075	Dichlorodifluoromethane	Dichlorodifluoro-methane	75-71-8	0.23	7.2
U076	1,1-Dichloroethane	1,1-Dichloroethane	75-34-3	0.059	6.0
U077	1,2-Dichloroethane	1,2-Dichloroethane	107-06-2	0.21	6.0
U078	1,1-Dichloroethylene	1,1-Dichloroethylene	75-35-4	0.025	6.0
U079	1,2-Dichloroethylene	trans-1,2-Dichloroethylene	156-60-5	0.054	30
U080	Methylene chloride	Methylene chloride	75-09-2	0.089	30
U081	2,4-Dichlorophenol	2,4-Dichlorophenol	120-83-2	0.044	14
U082	2,6-Dichlorophenol	2,6-Dichlorophenol	87-65-0	0.044	14
U083	1,2-Dichloropropane	1,2-Dichloropropane	78-87-5	0.85	18
U084	1,3-Dichloropropylene	cis-1,3-Dichloropropylene	10061-01-5	0.036	18
		trans-1,3-Dichloropropylene	10061-02-6	0.036	18
U085	1,2:3,4-Diepoxybutane	1,2:3,4-Diepoxybutane	1464-53-5	(WETOX or CHOXD) fb	CMBST

Treatment Standards for Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
U086	N,N'-Diethylhydrazine	N,N'-Diethylhydrazine	1615-80-1	CARBN; or CMBST CHOXD; CHRED; CARBN: BIODG; or CMBST	CHOXD; CHRED; or CMBST
U087	O,O-diethyl S-methyldithiophosphate	O,O-diethyl S-methyl-dithiophosphate	3288-58-2	CARBN; or CMBST	CMBST
U088	Diethyl phthalate	Diethyl phthalate	84-66-2	0.20	28
U089	Diethyl stilbestrol	Diethyl strilbestrol	56-53-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U090	Dihydrosafrole	Dihydrosafrole	94-58-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U091	3,3' Dimethoxybenzidine	3,3' Dimethoxybenzidine	119-90-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U092	Dimethylamine	Dimethylamine	124-40-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U093	p-Dimethylaminoazobenzene	p-Dimethylaminoazo-benzene	60-11-7	0.13	CMBST
U094	7,12-Dimethylbenz(a)anthracene	7,12-Dimethylbenz(a) anthracene	57-97-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U095	3,3' Dimethylbenzidine	3,3' Dimethylbenzidine	119-93-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U096	alpha, alpha-Dimethyl benzyl hydroperoxide	alpha, alpha-Dimethyl benzyl hydroperoxide	80-15-9	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U097	Dimethylcarbamoyl chloride	Dimethylcarbamoyl chloride	79-44-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U098	1,1-Dimethylhydrazine	1,1-Dimethylhydrazine	57-14-7	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U099	1,2-Dimethylhydrazine	1,2-dimethylhydrazine	540-73-8	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U101	2,4-Dimethylphenol	2,4-Dimethylphenol	105-67-9	0.036	14
U102	Dimethyl phthalate	Dimethyl phthalate	131-11-3	0.047	28
U103	Dimethyl sulfate	Dimethyl sulfate	77-78-1	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U105	2,4-Dinitrotoluene	2,4-Dinitrotoluene	121-14-2	0.32	140
U106	2,6-Dinitrotoluene	2,6-Dinitrotoluene	606-20-2	0.55	28
U107	Di-n-octyl phthalate	Di-n-octyl phthalate	117-84-0	0.017	28
U108	1,4-Dioxane	1,4-Dioxane	123-91-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
		1,4-Dioxane; alternate [6] standard for nonwastewaters only	123-91-1	NA	170
U109	1,2-Diphenylhydrazine	1,2-Diphenylhydrazine	122-66-7	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
		1,2-Diphenylhydrazine; alternate [6] standard for wastewaters only	122-66-7	0.087	NA
U110	Dipropylamine	Dipropylamine	142-84-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
U111	Di-n-propylnitrosamine	Di-n-propylnitrosamine	621-64-7	0.40	14
U112	Ethyl acetate	Ethyl acetate	141-78-6	0.34	33
U113	Ethyl acrylate	Ethyl acrylate	140-88-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U114	Ethylenebisdithiocarbamic acid salts and esters	Ethylenebisdithiocarbamic acid	111-54-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U115	Ethylene oxide	Ethylene oxide	75-21-8	(WETOX or CHOXD) fb CARBN; or CMBST	CHOXD; or CMBST
		Ethylene oxide; alternate [6] standard for wastewaters only	73-21-8	0.12	NA
U116	Ethylene thiourea	Ethylene thiourea	96-45-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U117	Ethyl ether	Ethyl ether	60-29-7	0.12	160
U118	Ethyl methacrylate	Ethyl methacrylate	97-63-2	0.14	160
U119	Ethyl methane sulfonate	Ethyl methane sulfonate	62-50-0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U120	Fluoranthene	Fluoranthene	206-44-0	0.068	3.4
U121	Trichloromonofluoromethane	Trichloromofluoromethane	75-69-4	0.020	30
U122	Formaldehyde	Formaldehyde	50-00-0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U123	Formic acid	Formic acid	64-18-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U124	Furan	Furan	110-00-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U125	Furfural	Furfural	98-01-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U126	Glycidylaldehyde	Glycidylaldehyde	765-34-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U127	Hexachlorobenzene	Hexachlorobenzene	118-74-1	0.055	10
U128	Hexachlorobutadiene	Hexachlorobutadiene	87-68-3	0.055	5.6
U129	Lindane	alpha-BHC	319-84-6	0.00014	0.066
		beta-BHC	319-85-7	0.00014	0.066
		delta-BHC	319-86-8	0.023	0.066
		gamma-BHC (Lindane)	58-89-9	0.0017	0.066
U130	Hexachlorocyclopentadiene	Hexachlorocyclopentadiene	77-47-4	0.057	2.4
U131	Hexachloroethane	Hexachloroethane	67-72-1	0.055	30
U132	Hexachlorophene	Hexachlorophene	70-30-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U133	Hydrazine	Hydrazine	302-01-2	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U134	Hydrogen fluoride	Fluoride (measured in wastewaters only)	16964-48-8	35	ADGAS fb NEUTR; or NEUTR
U135	Hydrogen Sulfide	Hydrogen Sulfide	7783-06-4	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
U136	Cacodylic acid	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
U137	Indeno (1,2,3-c,d)pyrene	Indeno(1,2,3-c,d)pyrene	193-39-5	0.0055	3.4
U138	Iodomethane	Iodomethane	74-88-4	0.19	65
U140	Isobutyl alcohol	Isobutyl alcohol	78-83-1	5.6	170
U141	Isosafrole	Isosafrole	120-58-1	0.081	2.6
U142	Kepone	Kepone	143-50-8	0.0011	0.13
U143	Lasiocarpine	Lasiocarpine	303-34-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U144	Lead acetate	Lead	7439-92-1	0.69	0.37 mg/l TCLP
U145	Lead phosphate	Lead	7439-92-1	0.69	0.37 mg/l TCLP
U146	Lead subacetate	Lead	7439-92-1	0.69	0.37 mg/l TCLP
U147	Maleic anhydride	Maleic anhydride	108-31-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U148	Maleic hydrazide	Maleic hydrazide	123-33-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U149	Malononitrile	Malononitrile	109-77-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U150	Melphalan	Melphalan	148-82-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U151	U151 (mercury) nonwastewaters that contain greater than or equal to 260 mg/kg total mercury.	Mercury	7439-97-6	NA	RMERC
	U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are residues from RMERC only.	Mercury	7439-97-6	NA	0.20 mg/l TCLP
	U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are not residues from RMERC	Mercury	7439-97-6	NA	0.025 mg/l TCLP
	All U151 (mercury) wastewaters	Mercury	7439-97-6	0.15	NA
	Elemental Mercury Contaminated with Radioactive Materials	Mercury	7439-97-6	NA	AMLGM
U152	Methacrylonitrile	Methacrylonitrile	126-98-7	0.24	84
U153	Methanethiol	Methanethiol	74-93-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U154	Methanol	Methanol	67-56-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
		Methanol; alternate [6] set of standards for both wastewaters and nonwastewaters	67-56-1	5.6	0.75 mg/l TCLP
U155	Methapyrilene	Methapyrilene	91-80-5	0.081	1.5
U156	Methyl chlorocarbonate	Methyl chlorocarbonate	79-22-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U157	3-Methylcholanthrene	3-Methylcholanthrene	56-49-5	0.0055	15
U158	4,4'-Methylene bis(2-chloroaniline)	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.50	30
U159	Methyl ethyl ketone	Methyl ethyl ketone	78-93-3	0.28	36

Treatment Standards For Hazardous Wastes

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		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
U160	Methyl ethyl ketone peroxide	Methyl ethyl ketone peroxide	1338-23-4	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U161	Methyl isobutyl ketone	Methyl isobutyl ketone	108-10-1	0.14	33
U162	Methyl methacrylate	Methyl methacrylate	80-62-6	0.14	160
U163	N-Methyl N'-nitro N-nitrosoguanidine	N-Methyl N'-nitro N-nitrosoguanidine	70-25-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U164	Methylthiouracil	Methylthiouracil	56-04-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U165	Napthalene	Napthalene	91-20-3	0.059	5.6
U166	1,4-Napthoquinone	1,4-Napthoquinone	130-15-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U167	1-Naphthlyamine	1-Naphthlyamine	134-32-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U168	2-Naphthlyamine	2-Naphthlyamine	91-59-8	0.52	CMBST
U169	Nitrobenzene	Nitrobenzene	98-95-3	0.068	14
U170	p-Nitrophenol	p-Nitrophenol	100-02-7	0.12	29
U171	2-Nitropropane	2-Nitropropane	79-46-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U172	N-Nitrosodi-n-butylamine	N-Nitrosodi-n-butylamine	924-16-3	0.40	17
U173	N-Nitrosodiethanolamine	N-Nitrosodiethanolamine	1116-54-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U174	N-Nitrosodiethylamine	N-Nitrosodiethylamine	55-18-5	0.40	28
U176	N-Nitroso-N-ethylurea	N-Nitroso-N-ethylurea	759-73-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U177	N-Nitroso-N-methylurea	N-Nitroso-N-methylurea	684-93-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U178	N-Nitroso-N-methylurethane	N-Nitroso-N-methylurethane	615-53-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U179	N-Nitrosopiperidine	N-Nitrosopiperidine	100-75-4	0.013	35
U180	N-Nitrosopyrrolidine	N-Nitrosopyrrolidine	930-55-2	0.013	35
U181	5-Nitro-o-toluidine	5-Nitro-o-toluidine	99-55-8	0.32	28
U182	Paraldehyde	Paraldehyde	123-63-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U183	Pentachlorobenzene	Pentachlorobenzene	608-93-5	0.055	10
U184	Pentachloroethane	Pentachloroethane	76-01-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
		Pentachloroethane; alternate [6] standards for both wastewaters and nonwastewaters	76-01-7	0.055	6.0
U185	Pentachloronitrobenzene	Pentachloronitrobenzene	82-68-8	0.055	4.8
U186	1,3-Pentadiene	1,3-Pentadiene	504-60-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U187	Phenacetin	Phenacetin	62-44-2	0.081	16
U188	Phenol	Phenol	108-95-2	0.039	6.2

Treatment Standards For Hazardous Wastes

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WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
U189	Phosphorus sulfide	Phosphorus sulfide	1314-80-3	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
U190	Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	100-21-0	0.055	28
		Phthalic anhydride	85-44-9	0.055	28
U191	2-Picoline	2-Picoline	109-06-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U192	Pronamide	Pronamide	23950-58-5	0.093	1.5
U193	1,3-Propane sultone	1,3-Propane sultone	1120-71-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U194	n-Propylamine	n-Propylamine	107-10-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U196	Pyridine	Pyridine	110-86-1	0.014	16
U197	p-Benzoquinone	p-Benzoquinone	106-51-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U200	Reserpine	Reserpine	50-55-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U201	Resorcinol	Resorcinol	108-46-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U202	Saccharin and salts	Saccharin	81-07-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U203	Safrole	Safrole	94-59-7	0.081	22
U204	Selenium dioxide	Selenium	7782-49-2	0.82	0.16 mg/l TCLP
U205	Selenium sulfide	Selenium	7782-49-2	0.82	0.16 mg/l TCLP
U206	Streptozotocin	Streptozotocin	18883-66-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U207	1,2,4,5-Tetrachlorobenzene	1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14
U208	1,1,1,2-Tetrachloroethane	1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
U209	1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0
U210	Tetrachloroethylene	Tetrachloroethylene	127-18-4	0.056	6.0
U211	Carbon tetrachloride	Carbon tetrachloride	56-23-5	0.057	6.0
U213	Tetrahydrofuran	Tetrahydroduran	109-99-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U214	Thallium (I) acetate	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
U215	Thallium (I) carbonate	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
U216	Thallium (I) chloride	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
U217	Thallium (I) nitrate	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
U218	Thioacetamide	Thioacetamide	62-55-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U219	Thiourea	Thiourea	62-56-6	(WETOX or CHOXD) fb	CMBST

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
U220	Toluene	Toluene	108-88-3	CARBN; or CMBST 0.080	10
U221	Toluenediamine	Toluenediamine	25376-45-8	CARBN; or CMBST	CMBST
U222	o-Toluidine hydrochloride	o-Toluidine hydrochloride	636-21-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U223	Toluene diisocyanate	Toluene diisocyanate	26471-62-5	CARBN; or CMBST	CMBST
U225	Bromoform (Tribromomethane)	Bromoform (Tribromomethane)	75-25-2	0.63	15
U226	1,1,1-Tricholoroethane	1,1,1-Tricholoroethane	71-55-6	0.054	6.0
U227	1,1,2-Tricholoroethane	1,1,2-Tricholoroethane	79-00-5	0.054	6.0
U228	Trichloroethylene	Trichloroethylene	79-01-6	0.054	6.0
U234	1,3,5-Trinitrobenzene	1,3,5-Trinitrobenzene	99-35-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U235	tris-(2,3-Dibromopropyl)-phosphate	tris-(2,3-Dibromopropyl)-phosphate	126-72-7	0.11	0.10
U236	Trypan Blue	Trypan Blue	72-57-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U237	Uracil mustard	Uracil mustard	66-75-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U238	Urethane (Ethyl carbamate)	Urethane (Ethyl carbamate)	51-79-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U239	Xylenes	Xylenes-mixed isomers (sum of o-, m-, and p-xylenes concentrations)	1330-20-7	0.32	30
U240	2,4-D (2,4-Dichlorophenoxyacetic acid)	2,4-D (2,4-Dichlorophenoxyacetic acid)	94-75-7	0.72	10
	2,4-D (2,4-Dichlorophenoxyacetic acid) salts and esters		NA	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U243	Hexachloropropylene	Hexachloropropylene	1888-71-7	0.035	30
U244	Thiram	Thiram	137-26-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U246	Cyanogen bromide	Cyanogen bromide	506-68-3	CHOXD; WETOX; or CMBST	CHOXD; WETOX; or CMBST
U247	Methoxychlor	Methoxychlor	72-43-5	0.25	0.18
U248	Warfarin, & salts, when present at concentrations of 0.3% or less	Warfarin	81-81-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U249	Zinc phosphide, Zn_3P_2, when present at concentrations of 10% or less	Zinc Phosphide	1314-84-7	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
U271	Benomyl [10]	Benomyl	17804-35-2	0.056	1.4
U278	Bendiocarb [10]	Bendiocarb	22781-23-3	0.056	1.4
U279	Carbaryl [10]	Carbaryl	63-25-2	0.006	0.014

Treatment Standards For Hazardous Wastes

(Note NA means not applicable)

WASTE CODE	WASTE DESCRIPTIONN AND TREATMENT/ REGULATORY SUBCATEGORY [1]	REGULATED HAZARDOUS CONSTITUENTS		WASTEWATERS	NONWASTEWATERS
		COMMON NAME	CAS [2] NO	Concentration in mg/l [3] or Technology Code [4]	Concentration in mg/kg [5] unless noted in "mg/l TCLP" or Technology Code [4]
U280	Barban [10]	Barban	101-27-9	0.056	1.4
U328	o-Toluidine	o-Toluidine	95-53-4	CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN.	CMBST; or Thermal Destruction
U353	p-Toluidine	p-Toluidine	106-49-0	CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN.	CMBST; or Thermal Destruction
U359	2-Ethoxyethanol	2-Ethoxyethanol	110-80-5	CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN.	CMBST
U364	Bendiocarb phenol [10]	Bendiocarb phenol	22781-23-3	0.056	1.4
U367	Carbofuran phenol [10]	Carbofuran phenol	1563-38-8	0.056	1.4
U372	Carbendazim [10]	Carbendazim	10605-21-7	0.056	1.4
U373	Propham [10]	Propham	122-42-9	0.056	1.4
U387	Prosulfocarb [10]	Prosulfocarb	52888-80-9	0.042	1.4
U389	Triallate [10]	Triallate	2303-17-5	0.042	1.4
U394	A2213 [10]	A2213	30558-43-1	0.042	1.4
U395	Diethylene glycol, dicarbamate [10]	Diethylene glycol, dicarbamate	5952-26-1	0.056	1.4
U404	Triethylamine [10]	Triethylamine	121-44-8	0.081	1.5
U409	Thiophanate-methyl [10]	Thiophanate-methyl	23564-05-8	0.056	1.4
U410	Thiodicarb [10]	Thiodicarb	59669-26-0	0.019	1.4
U411	Propoxur [10]	Propoxur	114-26-1	0.056	1.4

FOOTNOTES TO TREATMENT STANDARDS TABLE 268.40:

1 The waste descriptions provided in this table do not replace waste descriptions in 40 CFR part 261. Descriptions of Treatment/Regulatory Subcategories are provided, as needed, to distinguish between applicability of different standards.

2 CAS means Chemical Abstract Services. When the waste code and/or regulated constituents are described as a combination of a chemical with it's salts and/or esters, the CAS number is given for the parent compound only.

3 Concentration standards for wastewaters are expressed in mg/l are based on analysis of composite samples.

4 All treatment standards expressed as a Technology Code or combination of Technology Codes are explained in detail in §268.42, Table 1 - Technology Codes and Descriptions of Technology-Based Standards.

5 Except for Metals (EP or TCLP) and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of 40 CFR part 264, subpart O or 40 CFR part 265, subpart O, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in 40 CFR 268.40(d). All concentration standards for nonwastewaters are based on analysis of grab samples.
6 Where an alternate treatment standard or set of alternate standards has been indicated, a facility may comply with this alternate standard, but only for the Treatment/Regulatory Subcategory or physical form (i.e., wastewater and/or nonwastewater) specified for that alternate standard.
7 Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using method 9010 or 9012, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, as incorporated by reference in 40 CFR 260.11, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.
8 These wastes, when rendered nonhazardous and then subsequently managed in CWA, or CWA-equivalent systems are not subject to treatment standards. (See §268.1(c)(3) and (4)).
9 These wastes, when rendered nonhazardous and then subsequently injected in a Class I SDWA well are not subject to treatment standards. (See 40 CFR 148.1(d)).
10 Between August 26, 1996, and August 26, 1997, the treatment standard for this waste may satisfied by either meeting the constituent concentrations in this table or by treating the waste by the specified technologies: combustion, as defined by the technology code CMBST at §268.42 Table 1 of this part, for nonwastewaters; and biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at §268.42 Table 1 of this part, for wastewaters.

268.41 Treatment standards expressed as concentrations in waste extract.

For the requirements previously found in this section and for treatment standards in Table CCWE--Constituent Concentrations in Waste Extracts, refer to Section 268.40.

268.42 Treatment standards expressed as specified technologies.

Note: For the requirements previously found in this section in Table 2--Technology-Based Standards By RCRA Waste Code, and Table 3--Technology-Based Standards for Specific Radioactive Hazardous Mixed Waste, refer to Section 268.40.

(a) The following wastes in paragraphs (a)(1) and (a)(2) of this section and in the table in Section 268.40 "Treatment Standards for Hazardous Wastes," for which standards are expressed as a treatment method rather than a concentration level, must be treated using the technology or technologies specified in paragraphs (a)(1) and (a)(2) and Table 1 of this section.

(1) Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 ppm but less than 500 ppm must be incinerated in accordance with the technical requirements of 40 CFR 761.70 or burned in high efficiency boilers in accordance with the technical requirements of 40 CFR 761.60. Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 500 ppm must be incinerated in accordance with the technical requirements of 40 CFR 761.70. Thermal treatment under this section must also be in compliance with applicable regulations in Parts 264, 265, and 266.

(2) Nonliquid hazardous wastes containing halogenated organic compounds (HOCs) in total concentration greater than or equal to 1,000 mg/kg and liquid HOC-containing wastes that are prohibited under Section 268.32(e)(1) of this part must be incinerated in accordance with the requirements of 40 CFR Part 264, Subpart O or 40 CFR Part 265, Subpart O. These treatment standards do not apply where the waste is subject to a Part 268, Subpart D treatment standard for a specific HOC (such as a hazardous waste chlorinated solvent for which a treatment standard is established under Section 268.41(a).

(3) A mixture consisting of wastewater, the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act, and de minimis losses of materials from manufacturing operations in which these materials are used as raw materials or are produced as products in the manufacturing process, and that meet the criteria of the D001 ignitable liquids containing greater than 10% total organic constituents (TOC) subcategory, is subject to the DEACT treatment standard described in Table 1 of this section. For purposes of this paragraph de minimis losses include those from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks from process equipment, storage tanks, or containers; leaks from well-maintained pump packings and seals; sample purgings; and relief device discharges.

TABLE 1.--TECHNOLOGY CODES AND DESCRIPTION OF TECHNOLOGY-BASED STANDARDS

Technology code	Description of technology-based standard
ADGAS	Venting of compressed gases into an absorbing or reacting media (i.e., solid or liquid)--venting can be accomplished through physical release utilizing values/piping; physical penetration of the container, and/or penetration through detonation.
AMLGM	Amalgamation of liquid, elemental mercury contaminated with radioactive materials utilizing inorganic reagents such as copper, zinc, nickel, gold, and sulfur that result in a nonliquid, semi-solid amalgam and thereby reducing potential emissions of elemental mercury vapors to the air.

TABLE 1.--TECHNOLOGY CODES AND DESCRIPTION OF TECHNOLOGY-BASED STANDARDS

Technology code	Description of technology-based standard
BIODG	Biodegradation of organics or non-metallic inorganics (i.e., degradable inorganics that contain the elements of phosphorus, nitrogen, and sulfur) in units operated under either aerobic or anaerobic conditions such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the biodegradation of many organic constituents that cannot be directly analyzed in wastewater residues).
CARBN	Carbon adsorption (granulated or powdered) of non-metallic inorganics, organo-metallics, and/or organic constituents, operated such that a surrogate compound or indicator parameter has not undergone breakthrough (e.g., Total Organic Carbon can often be used as an indicator parameter for the adsorption of many organic constituents that cannot be directly analyzed in wastewater residues). Breakthrough occurs when the carbon has become saturated with the constituent (or indicator parameter) and substantial change in adsorption rate associated with that constituent occurs.
CHOXD	Chemical or electrolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combinations or reagents: (1) Hypochlorite (e.g. bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permangantes; and/or (9) other oxidizing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues). Chemical oxidation specifically includes what is commonly referred to as alkaline chlorination.
CHRED	Chemical reduction utilizing the following reducing reagents (or waste reagents) or combinations of reagents: (1) Sulfur dioxide; (2) sodium, potassium, or alkali salts or sulfites, bisulfites, metabisulfites, and polyethylene glycols (e.g., NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts, and/or (5) other reducing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator paramether has been substantially reduced in concentration in the residuals (e.g., Total Organic Halogens can often be used as an indicator parameter for the reduction of many halogenated organic constituents that cannot be directly analyzed in wastewater residues). Chemical reduction is commonly used for the reduction of hexavalent chromium to the trivalent state.
CMBST	High temperature organic destruction technologies, such as combustion in incinerators, boilers, or industrial furnaces operated in accordance with the applicable requirements of 40 CFR part 264, subpart O, 40 CFR part 265, subpart O; or 40 CFR part 266, subpart H, and in other units operated in accordance with applicable technical operating requirements; and certain non-combustive technologies, such as the Catalytic Extraction Process.
DEACT	Deactivation to remove the hazardous characteristics of a waste due to its ignitability corrosivity, and/or reactivity.
FSUBS	Fuel substitution in units operated in accordance with applicable technical operating requirements.
HLVIT	Vitrification of high level mixed radioactive wastes in units in compliance with all applicable radioactive protection requirements under control of the Nuclear Regulatory Commission.
IMERC	Incineration of waste containing organics and mercury in units operated in accordance with the technical operating requirements of 40 CFR part 264, subpart O and 40 CFR part 265, subpart O. All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (e.g., High or Low Mercury Subcategories).

TABLE 1.–TECHNOLOGY CODES AND DESCRIPTION OF TECHNOLOGY-BASED STANDARDS

Technology code	Description of technology-based standard
INCIN	Incineration in units operated in accordance with the technical operating requirements of 40 CFR part 264, subpart O and 40 CFR part 265, subpart O.
LLEXT	Liquid-liquid extraction (often referred to as solvent extraction) of organics from liquid wastes into an immiscible solvent for which the hazardous constituents have a greater solvent affinity, resulting in an extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and a raffinate (extracted liquid waste) proportionately low in organics that must undergo further treatment as specified in the standard.
MACRO	Macroencapsulation with surface coating materials such as polymeric organics (e.g. resins and plastics) or with a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media. Macroencapsulation specifically does not include any material that would be classified as a tank or container according to 40 CFR 260.10.
NEUTR	Neutralization with the following reagents (or waste reagents) or combinations of reagents: (1) Acids; (2) bases; or (3) water (including wastewaters) resulting in a pH greater than 2 but less than 12.5 as measured in the aqueous residuals.
NLDBR	No land disposal based on recycling.
PRECP	Chemical precipitation of metals and other inorganics as insoluble precipitates of oxides, hydroxides, carbonates, sulfides, sulfates, chlorides, flourides, or phosphates. The following reagents (or waste reagents) are typically used alone or in combination: (1) Lime (i.e., containing oxides and/or hydroxides of calcium and/or magnesium; (2) caustic (i.e., sodium and/or potassium hydroxides; (3) soda ash (i.e., sodium carbonate); (4) sodium sulfide; (5) ferric sulfate or ferric chloride (6) alum; or (7) sodium sulfate. Additional floculating, coagulation, or similar reagents/processes that enhance sludge dewatering characteristics are not precluded from use.
RBERY	Thermal recovery of Beryliium.
RCGAS	Recovery/reuse of compressed gases including techniques such as reprocessing of the gases for reuse/resale; filtering/adsorption of impurities; remixing for direct reuse or resale; and use of the gas as a fuel source.
RCORR	Recovery of acids or bases utilizing one or more of the following recovery technologies: (1) Distillation (i.e., thermal concentration); (2) ion exchange; (3) resin or solid adsorption; (4) reverse osmosis; and/or (5) incineration for the recovery of acid--Note: this does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.
RLEAD	Thermal recovery of lead in secondary lead smelters.
RMERC	Retorting or roasting in a thermal processing unit capable of volatilizing mercury and subsequently condensing the volatilized mercury for recovery. The retorting or roasting unit (or facility) must be subject to one or more of the following: (a) A National Emissions Standard for Hazardous Air Pollutants (NESHAP) for mercury; (b) a Best Available Control Technology (BACT) or a Lowest Achievable Emission Rate (LAER) standard for mercury imposed pursuant to a Prevention of Significant Deterioration (PSD) permit; or (c) a state permit that establishes emission limitations (within meaning of Section 302 of the Clean Air Act) for mercury. All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (e.g., High or Low Mercury Subcategories).

TABLE 1.--TECHNOLOGY CODES AND DESCRIPTION OF TECHNOLOGY-BASED STANDARDS

Technology code	Description of technology-based standard
RMETL	Recovery of metals or inorganics utilizing one or more of the following direct physical/removal technologies: (1) Ion exchange; (2) resin or solid (i.e.,zeolites) adsorption; (3) reverse osmosis; (4) chelation/solvent extraction; (5) freeze crystalization; (6) ultrafiltration; and/or (7) simple precipitation (i.e., crystalization)--Note: this does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.
RORGS	Recovery of organics utilizing one or more of the following technologies: (1) Distillation; (2) thin film evaporation; (3) steam stripping; (4) carbon adsorption; (5) critical fluid extraction; (6) liquid-liquid extraction; (7) precipitation/crystalization (including freeze crystalization); or 8) chemical phase separation techniques (i.e., addition of acids, bases, demulsifiers, or similar chemicals); Note: this does not preclude the use of other physical phase separation techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.
RTHRM	Thermal recovery of metals or inorganics from nonwastewaters in units identified as industrial furnaces according to 40 CFR 260.10 (1), (6), (7), (11), and 12 under the definition of "Industrial furnaces."
RZINC	Resmelting in high temperature metal recovery units for the purpose of recovery of zinc.
STABL	Stabilization with the following reagents (or waste reagents) or combinations of reagents: (1) Portland cement; or (2) lime/pozzolans (e.g., fly ash and cement kiln dust)--this does not preclude the addition of reagents (e.g., iron salts, silicates, and clays) designed to enhance the set-cure time and/or compressive strength, or to overall reduce the leachability of the metal or inorganic.
SSTRP	Stream stripping of organics from liquid wastes utilizing direct application of steam to the wastes operated such that liquid and vapor flow rates, as well as, temperature and pressure ranges have been optimized, monitored, and maintained. These operating parameters are dependent upon the design parameters of the unit such as, the number of separation stages and the internal column design. Thus, resulting in a condensed extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and an extracted wastewater that must undergo further treatment as specified in the standard.
WETOX	Wet air oxidation performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues).
WTRRX	Controlled reaction with water for highly reactive inorganic or organic chemicals with precautionary controls for protection of workers from potential violent reactions as well as precautionary controls for potential emissions of toxic/ignitable levels of gases released during the reaction.

NOTE 1: When a combination of these technologies (i.e., a treatment train) is specified as a single treatment standard, the order of application is specified in Section 268.42, Table 2 by indicating the five letter technology code that must be applied first, then the designation (fb." (an abbreviation for "followed by"), then the five letter technology code for the technology that must be applied next, and so on.

NOTE 2: When more than one technology (or treatment train) are specified as alternative treatment standards, the five letter technology codes (or the treatment trains) are separated by a semicolon (;) with the last technology preceded by the word "OR". This indicates that any one of these BDAT technologies or treatment trains can be used for compliance with the standard.

(b) Any person may submit an application to the Administrator demonstrating that an alternative treatment method can achieve a measure of performance equivalent to that achieved by methods specified in paragraph (a), (c), and (d) of this section for wastes or specified in Table 1 of Section 268.45 for hazardous debris. The applicant must submit information demonstrating that his treatment method is in compliance with federal, state, and local requirements and is protective of human health and the environment. On the basis of such information and any other available information, the Administrator may approve the use of the alternative treatment method if he finds that the alternative treatment method provides a measure of performance equivalent to that achieved by methods specified in paragraphs (a), (c), and (d) of this section for wastes or in Table 1 of Section 268.45 for hazardous debris. Any approval must be stated in writing and may contain such provisions and conditions as the Administrator deems appropriate. The person to whom such approval is issued must comply with all limitations contained in such a determination.

(c) As an alternative to the otherwise applicable subpart D treatment standards, lab packs are eligible for land disposal provided the following requirements are met:
  (1) The lab packs comply with the applicable provisions of 40 CFR 264.316 and 40 CFR 265.316;
  (2) The lab pack does not contain any of the wastes listed in Appendix IV to part 268.
  (3) The lab packs are incinerated in accordance with the requirements of 40 CFR part 264, subpart O or 40 CFR part 265, subpart O; and
  (4) Any incinerator residues from lab packs containing D004, D005, D006, D007, D008, D010, and D011 are treated in compliance with the applicable treatment standards specified for such wastes in subpart D of this part.

(d) Radioactive hazardous mixed wastes are subject to the treatment standards in Section 268.40. Where treatment standards are specified for radioactive mixed wastes in the Table of Treatment Standards, those treatment standards will govern. Where there is no specific treatment standard for radioactive mixed waste, the treatment standard for the hazardous waste (as designated by EPA waste code) applies. Hazardous debris containing radioactive waste is subject to the treatment standards specified in Section 268.45.

268.43 Treatment standards expressed as waste concentrations.

For the requirements previously found in this section and for treatment standards in Table CCW--Constituent Concentrations in Wastes, refer to Section 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 treatment facility 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 differs significantly from wastes analyzed in developing the treatment standard, the waste cannot be treated to specified levels or by the specified methods. The petitioner may also demonstrate that it is treating underlying hazardous constituents in characteristically hazardous wastewaters by sending the waste to a properly designed and operated BAT/PSES system, which may not be achieving the treatment standards found in Section 268.48.

(b) Each petition must be submitted in accordance with the procedures in Section 269.20.

(c) Each petition must include the following statement signed by the petitioner or an authorized representative:

> "I certify under penalty of law that I have personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that these are significant penalties for submitting false information, including the possibility of fine and imprisonment."

(d) After receiving a petition for variance from a treatment standard, the Administrator may request any additional information or samples which he may require to evaluate the petition. Additional copies of the complete petition may be requested as needed to send to affected states and Regional Offices.

(e) The Administrator will give public notice in the Federal Register of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a variance from a treatment standard will be published in the Federal Register.

(f) A generator, treatment facility, or disposal facility that is managing a waste covered by a variance from the treatment standards must comply with the waste analysis requirements for restricted wastes found under Section 268.7.

(g) During the petition review process, the applicant is required to comply with all restrictions on land disposal under this part once the effective date for the waste has been reached.

(h) Where the treatment standard is expressed as a concentration in a waste or waste extract and a waste generated under conditions specific to only one site cannot be treated to the specified level, or where the treatment technology is not appropriate to the waste, the generator or treatment facility may apply to the Administrator, or his delegated representative, for a site-specific variance from a treatment standard. The applicant for a site-specific variance must demonstrate that because the physical or chemical properties of the waste differs signficantly from the waste analyzed in developing the treatment standard, the waste cannot be treated to specified levels or by the specified methods.

(i) Each application for a site-specific variance from a treatment standard must include the information in Section 260.20(b)(1)-(4);

(j) After receiving an application for a site-specific variance from a treatment standard, the Assistant Administrator, or his delegated representative, may request any additional information or samples which may be required to evaluate the application.

(k) A generator, treatment facility, or disposal facility that is managing a waste covered by a site-specific variance from a treatment standard must comply with the waste analysis requirement for restricted wastes found under Section 268.7.

(l) During the application review process, the applicant for a site-specific variance must comply with all restrictions on land disposal under this part once the effective date for the waste has been reached.

268.45 Treatment Standards for Hazardous Debris.

(a) *Treatment Standards.* Hazardous debris must be treated prior to land disposal as follows unless EPA determines under Section 261.3(e)(2) of this chapter that the debris is no longer contaminated with hazardous waste or the debris is treated to the waste-specific treatment standard provided in this subpart for the waste contaminating the debris:

(1) *General.* Hazardous debris must be treated for each "contaminant subject to treatment" defined by paragraph (b) of this section using the technology or technologies identified in Table 1 of this section.

(2) *Characteristic debris.* Hazardous debris that exhibits the characteristic of ignitability, corrosivity, or reactivity identified under Sections 261.21, 261.22, and 261.23 of this chapter, respectively, must be deactivated by treatment using one of the technologies identified in Table 1 of this section.

(3) *Mixtures of debris types.* The treatment standards of Table 1 in this section must be achieved for each type of debris contained in a mixture of debris types. If an immobilization technology is used in a treatment train, it must be the last treatment technology used.

(4) *Mixtures of contaminant types.* Debris that is contaminated with two or more contaminants subject to treatment identified under paragraph (b) of this section must be treated for each contaminant using one or more treatment technologies identified in Table 1 of this section. If an immobilization technology is used in a treatment train, it must be the last treatment technology used.

(5) *Waste PCBs.* Hazardous debris that is also a waste PCB under 40 CFR part 261 is subject to the requirements of either 40 CFR part 761 or the requirements of this section, whichever are more stringent.

(b) *Contaminants Subject to Treatment.* Hazardous debris must be treated for each "contaminant subject to treatment." The contaminants subject to treatment must be determined as follows:

(1) *Toxicity characteristic debris.* The contaminants subject to treatment for debris that exhibits the Toxicity Characteristic (TC) by Section 261.24 of this chapter are those EP constituents for which the debris exhibits the TC toxicity characteristic.

(2) *Debris contaminated with listed waste.* The contaminants subject to treatment for debris that is contaminated with a prohibited listed hazardous waste are those constituents or wastes for which treatment standards are established for the waste under Section 268.40.

(3) *Cyanide reactive debris.* Hazardous debris that is reactive because of cyanide must be treated for cyanide.

(c) *Conditioned Exclusion of Treated Debris.* Hazardous debris that has been treated using one of the specified extraction or destruction technologies in Table 1 of this section and that does not exhibit a characteristic of hazardous waste identified under subpart C, part 261, of this chapter after treatment is not a hazardous waste and need not be managed in a subtitle C facility. Hazardous debris contaminated with a listed waste that is treated by an immobilization technology specified in Table 1 is a hazardous waste and must be managed in a subtitle C facility.

(d) *Treatment Residuals.*

(1) *General requirements.* Except as provided by paragraphs (d)(2) and (d)(4) of this section:

(i) Residue from the treatment of hazardous debris must be separated from the treated debris using simple physical or mechanical means; and

(ii) Residue from the treatment of hazardous debris is subject to the waste-specific treatment standards provided by subpart D of this part for the waste contaminating the debris.

(2) *Nontoxic debris.* Residue from the deactivation of ignitable, corrosive, or reactive characteristic hazardous debris (other than cyanide-reactive) that is not contaminated with a contaminant subject to treatment defined by paragraph (b) of this section, must be deactivated prior to land disposal and is not subject to the waste-specific treatment standards of subpart D of this part.

(3) *Cyanide-reactive debris.* Residue from the treatment of debris that is reactive because of cyanide must meet the standards for D003 under Section 268.43.

(4) *Ignitable nonwastewater residue.* Ignitable nonwastewater residue containing equal to or greater than 10% total organic carbon is subject to the technology-based standards for D001; "Ignitable Liquids based on Section 261.21(a)(1)" under Section 268.42.

(5) *Residue from spalling.* Layers of debris removed by spalling are hazardous debris that remain subject to the treatment standards of this section.

TABLE 1. -- ALTERNATIVE TREATMENT STANDARDS FOR HAZARDOUS DEBRIS[1]

Technology description	Performance and/or design and operating standard	Contaminant restrictions[2]
A. Extraction Technologies:		
1. **Physical Extraction**		
a. Abrasive Blasting. Removal of contaminated debris surface layers using water and/or air pressure to propel a solid media (e.g., steel shot, aluminum oxide grit, plastic beads).	Glass, Metal, Plastic, Rubber: Treatment to a clean debris service.[3] Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Removal of at least 0.6 cm of the surface layer; treatment to a clean debris surface.[3]	
b. Scanification, Grinding, and Planing: Process utilizing striking piston heads, saws, or rotating grinding wheels such that contaminated debris surface layers are removed.	Same as above	Same as above
c. Spalting: Drifting or chipping holes at appropriate locations and depth in the contaminated debris surface and applying a tool which exerts a force on the sides of those holes such that the surface layer is removed. The surface layer removed remains hazardous debris subject to the debris treatment standards.	Same as above	Same as above
d. Vibratory Finishing, Process utilizing scrubbing media, flushing fluid, and oscillating energy such that hazardous contaminants or contaminated debris surface layers are removed.[4]	Same as above	Same as above
e. High Pressure Steam and Water Sprays: Application of water or steam sprays of sufficient temperature, pressure, residence time, agitation, surfactants, and detergents to remove hazardous contaminants from debris surfaces or to remove contaminated debris surface layers.	Same as above	Same as above
2. **Chemical Extraction**		
a. Water Washing and Spraying: Application of water sprays or water baths of sufficient temperature, pressure, residence time, agitation, surfactants, acids, bases, and detergents to remove hazardous contaminants from debris surfaces and surface pores or to remove contaminated debris surface layers.	All Debris: Treatment to a clean debris surface;[3] Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 1.2 cm (½ inch) in one dimension (i.e., thickness limit,[3] except that this thickness limit may be waived under an "Equivalent Technology" approval under § 268.42(b);[5] debris surfaces must be in contact with water solution for a least 15 minutes	

TABLE 1. -- ALTERNATIVE TREATMENT STANDARDS FOR HAZARDOUS DEBRIS[1] (Continued)

Technology description	Performance and/or design and operating standard	Contaminant restrictions[2]
b. Liquid Phase Solvent Extraction: Removal of hazardous contaminants from debris surfaces and surface pores by applying a nonaqueous liquid or liquid solution which causes the hazardous contaminants to enter the liquid phase and be flushed away from the debris along with the liquid or liquid solution while using appropriate agitation, temperature, and residence time.[4]	Same as above	
c. Vapor Phase Solvent Extraction: Application of an organic vapor using sufficient agitation, residence time, and temperature to cause hazardous contaminants on contaminated debris surfaces and surface pores to enter the vapor phase and be flushed away with the organic vapor.[4]	Same as above, except that brick, cloth, concrete, paper, pavement, rock and wood surfaces must be in contact with the organic vapor for at least 60 minutes.	
3. Thermal Extraction		
a. High Temperature Metals Recovery: Application of sufficient heat, residence time, mixing, fluxing agents, and/or carbon in a smelting, melting, or refining furnace to separate metals from debris.	For refining furnaces, treated debris must be separated from treatment residuals using simple physical or mechanical means,[9] and, prior to further treatment, such residuals must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.	
b. Thermal Desorption: Heating in an enclosed chamber under either oxidizing or nonoxidizing atmospheres at sufficient temperature and residence time to vaporize hazardous contaminants from contaminated surfaces and surface pores and to remove the contaminants from the heating chamber in a gaseous exhaust gas.[7]	All Debris: Obtain an "Equivalent Technology" approval under § 268.42(b);[a] treated debris must be separated from treatment residuals using simple physical or mechanical means,[a] and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris. Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 10 cm (4 inches) in one dimension (i.e., thickness limit),[5] except that this thickness limit may be waived under the "Equivalent Technology" approval.	All Debris: Metals other than mercury.

TABLE 1. -- ALTERNATIVE TREATMENT STANDARDS FOR HAZARDOUS DEBRIS[1] (Continued)

Technology description	Performance and/or design and operating standard	Contaminant restrictions[2]
B. Destruction Technologies:		
1. **Biological Destruction** (Biodegradation): Removal of hazardous contaminants from debris surfaces and surface pores in an equeous solution and biodegradation of organic or nonmetalic inorganic compounds (i.e., inorganics that contain phosphorus, nitrogen, or sulfur) in units operated under either aerobic or anaerobic conditions.	All Debris: Obtain an "Equivalent Technology" approval under § 268.42(b);[a] treated debris must be separated from treatment residuals using simple physical or mechanical means,[a] and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris. Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 10 cm (4 inches) in one dimension (i.e., thickness limit),[3] except that this thickness limit may be waived under the "Equivalent Technology" approval.	All Debris: Metal contaminants.
2. **Chemical Destruction**		
a. Chemical Oxidation: Chemical or electrolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combination of reagents-- (1) hypochlorite (e.g. bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permanganates; and/or (9) other oxidizing reagents of equivalent destruction efficiency.[4] Chemical oxidation specifically includes what is referred to as alkaline chlorination.	All Debris: Obtain an "Equivalent Technology" approval under § 268.42(b);[a] treated debris must be separated from treatment residuals using simple physical or mechanical means,[a] and, prior to further meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris. Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 10 cm (4 inches) in one dimension (i.e., thickness limit),[3] except that this thickness limit may be waived under the "Equivalent Technology" approval.	All Debris: Metal contaminants.
b. Chemical Reduction: Chemical reaction utilizing the following reducing reagents (or waste reagents) or combination of reagents: (1) sulfur dioxide; (2) sodium, potassium, or alkali salts of sulfites, bisulfites, and metabisulfites, and poly-ethylene glycols (e.g., NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; and/or (5) other reducing reagents of equivalent efficiency.[4]	Same as above	Same as above.

TABLE 1. -- ALTERNATIVE TREATMENT STANDARDS FOR HAZARDOUS DEBRIS[1] (Continued)

Technology description	Performance and/or design and operating standard	Contaminant restrictions[2]
3. **Thermal Destruction:** Treatment in an incinerator operating in accordance with Subpart O of Parts 264 or 265 of this chapter; a boiler or industrial furnace operating in accordance with Subpart H of Part 266 of this chapter, or other thermal treatment unit operated in accordance with Subpart X, Part 264 of this chapter, or Subpart P, Part 265 of this chapter, but excluding for purposes of these debris treatment standards Thermal Desorption units.	Treated debris must be separated from treatment residuals using simple physical[9] or mechanical means, and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.	Brick, Concrete, Glass, Metal, Pavement, Rock, Metal: Metals other than mercury, except that there are no metal restrictions for vitrification. Debris contaminated with a dioxin-listed waste. Obtain an "Equivalent Technology" approval under §268.42(b),[a] except that this requirement does not apply to vitrification.
C. Immobilization Technologies:		
1. **Macroencapsulation:** Application of surface coating materials such as polymeric organics (e.g., resins and plastics) or use of a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media.	Encapsulating material must completely encapsulate debris and be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other waste, microbes).	None.
2. **Microencapsulation:** Stabilization of the debris with the following reagents (or waste reagents) such that the leachability of the hazardous contaminants is reduced: (1) Portland cement; or (2) line/pozzolans (e.g., fly ash and cement kiln dust). Reagents (e.g., iron salts, silicates, and clays) may be added to enhance the set/cure time and/or compressive strength or to reduce the leachability of the hazardous constituents.[5]	Leachability of the hazardous contaminants must be reduced.	None.
3. **Sealing:** Application of an appropriate material which adheres tightly to the debris surface to avoid exposure of the surface to potential leaching media. When necessary to effectively seal the surface, sealing entails pretreatment of the debris surface to remove foreign matter and to clean and roughen the surface. Sealing materials include epoxy, silicone, and urethane compounds, but paint may not be used as a sealant.	Sealing must avoid exposure of the debris surface to potential leaching media and sealant must be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after after placement (leachate, other waste, microbes).	None.

1 Hazardous debris must be treated by either these standards or the waste-specific treatment standards for the waste contaminating the debris. The treatment standards must be met for each type of debris contained in a mixture of debris types, unless the debris is converted into treatment residue as a result of the treatment process. Debris treatment residuals are subject to the waste-specific treatment standards for the waste contaminating the debris.

2 Contaminant restriction means that the technology is not BDAT for that contaminant, if debris containing a restricted contaminant is treated by the technology, the contaminant must be subsequently treated by a technology for which it is not restricted in order to be land disposed (and excluded from Subtitle C regulation).

3 "Clean debris surface" means the surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discolorations, and soil and waste in cracks, crevices, and pits may be present provided that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5% of each square inch of surface area.

4 Acids, solvents, and chemical reagents may react with some debris and contaminants to form hazardous compounds. For example, acid washing of cyanide-contaminated debris could result in the formation of hydrogen cyanide. Some acids may also react violently with some debris and contaminants, depending on the concentration of the acid and the type of debris and contaminants. Debris treaters should refer to the safety precautions specified in Material Safety Data Sheets for various acids to avoid applying an incompatible acid to a particular debris/contaminant combination. For example, concentrated sulfuric acid may react violently with certain organic compounds, such as acrylonitrile.

5 If reducing the particle size of debris to meet the treatment standards results in material that no longer meets the 60 mm minimum particle size limit for debris, such material is subject to the waste-specific treatment standards for the waste contaminating the material, unless the debris has been cleaned and separated from contaminated soil and waste prior to size reduction. At a minimum, simple physical or mechanical means must be used to provide such cleaning and separation of nondebris materials to ensure that the debris surface is free of caked soil, waste, or other nondebris material.

6 Dioxin-listed wastes are EPA Hazardous Waste numbers F020, F021, F022, F023, F026, and F027.

7 Thermal desorption is distinguished from Thermal Destruction in that the primary purpose of Thermal Desorption is to volatilize contaminants and to remove them from the treatment chamber for subsequent destruction or other treatment.

8 The demonstration "Equivalent Technology" under Section 268.42(b) must document that the technology treats contaminants subject to treatment to a lever equivalent to that required by the performance and design and operating standards for other technologies in this table such that residual levels of hazardous contaminants will not pose a hazard to human health and the environment absent management controls.

9 Any soil, waste, and other nondebris material that remains on the debris surface (or remains mixed with the debris) after treatment is considered a treatment residual that must be separated from the debris using, at a minimum, simple physical or mechanical means. Examples of simple physical or mechanical means are vibratory or trommel screening or water washing. The debris surface need not be cleaned to a "clean debris surface" as defined in note 3 when separating troated debris from residue; rather, the surface must be free of caked soil, waste, or other nondebris material. Treatment residuals are subject to the waste-specific treatment standards for the waste contaminating the debris.

268.46 Alternative Treatment Standards Based on HTMR.

For the treatment standards previously found in this section, refer to Section 268.40.

268.48 Universal Treatment Standards

(a) Table UTS identifies the hazardous constituents, along with the nonwastewater 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 as defined in §268.2(i), these treatment standards may not be exceeded. Compliance with these treatment standards is measured by an analysis of grab samples, unless otherwise noted in the following Table UTS.

§268.48 Table UTS Universal Treatment Standards
(Note NA means not applicable)

Regulated constituent-common name	CAS' No.	Wastewater standard	Nonwastewater standard
		Concentration in mg/2	Concentration in mg/kg3 unless noted as "mg/l TCLP"
I Organic Constituents			
A2213[6]	30558-43-1	0.042	1.4
Acenaphthene	83-32-9	0.059	3.4
Acenaphthylene	208-96-8	0.059	3.4
Acetone	67-64-1	0.28	160
Acetonitrile	75-05-8	5.6	38
Acetophenone	96-86-2	0.010	9.7
2-Acetylaminofluorene	53-96-3	0.059	140
Acrolein	107-02-8	0.29	NA
Acrylamide	79-06-1	19	23
Acrylonitrile	107-13-1	0.24	84
Aldicarb sulfone[6]	1646-88-4	0.056	0.28
Aldrin	309-00-2	0.021	0.066
4-Aminobiphenyl	92-67-1	0.13	NA
Aniline	62-53-3	0.81	14
Anthracene	120-12-7	0.059	3.4
Aramite	140-57-8	0.36	NA
alpha-BHC	319-84-6	0.00014	0.066
beta-BHC	319-85-7	0.00014	0.066
delta-BHC	319-86-8	0.023	0.066
gamma-BHC	58-89-9	0.0017	0.066
Barban[6]	101-27-9	0.056	1.4
Bendiocarb[6]	22781-23-3	0.056	1.4
Bendiocarb phenol[6]	22961-82-6	0.056	1.4
Benomyl[6]	17804-35-2	0.056	1.4
Benzene	71-43-2	0.14	10
Benz(a)anthracene	56-55-3	0.059	3.4
Benzal chloride	98-87-3	0.055	6.0
Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)	205-99-2	0.11	6.8
Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)	207-08-9	0.11	6.8
Benzo(g,h,i)perylene	191-24-2	0.0055	1.8
Benzo(a)pyrene	50-32-8	0.061	3.4
Bromodichloromethane	75-27-4	0.35	15
Bromomethane/Methyl bromide	74-83-9	0.11	15
4-Bromophenyl phenyl ether	101-55-3	0.055	15
n-Butyl alcohol	71-36-3	5.6	2.6
Butylate[6]	2008-41-5	0.042	1.4
Butyl benzyl phthalate	85-68-7	0.017	28
2-sec-Butyl-4,6-dinitrophenol/Dinoseb	88-85-7	0.066	2.5
Carbaryl[6]	63-25-2	0.006	0.14
Carbenzadim[6]	10605-21-7	0.056	1.4
Carbofuran[6]	1563-66-2	0.006	0.14
Carbofuran phenol[6]	1563-38-8	0.056	1.4
Carbon disulfide	75-15-0	3.8	4.8 mg/l TCLP
Carbon tetrachloride	56-23-5	0.057	6.0
Carbosulfan[6]	55285-14-8	0.028	1.4
Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
p-Chloroaniline	106-47-8	0.46	16
Chlorobenzene	108-90-7	0.057	6.0
Chlorobenzilate	510-15-6	0.10	NA
2-Chloro-1,3-butadiene	126-99-8	0.057	0.28
Chlorodibromomethane	124-48-1	0.057	15
Chloroethane	75-00-3	0.27	6.0

§268.48 Table UTS Universal Treatment Standards
(Note NA means not applicable)

Regulated constituent-common name	CAS' No.	Wastewater standard	Nonwastewater standard
		Concentration in mg/2	Concentration in mg/kg3 unless noted as "mg/l TCLP"
bis(2-Chloroethoxy) methane	111-91-1	0.036	7.2
bis(2-Chloroethyl)ether	111-44-4	0.033	6.0
Chloroform	67-66-3	0.046	6.0
bis(2-Chloroisopropyl) ether	39638-32-9	0.055	7.2
p-Chloro-m-cresol	59-50-7	0.018	14
2-Chloroethyl vinyl ether	110-75-8	0.062	NA
Chloromethane (Methyl chloride)	74-87-3	0.19	30
2-Chloronaphthalene	91-58-7	0.055	5.6
2-Chlorophenol	95-57-8	0.044	5.7
3-Chloropropylene	107-05-1	0.036	30
Chrysene	218-01-9	0.059	3.4
o-Cresol	95-48-7	0.11	5.6
m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6
p-Cresol (difficult to distinguish from m-cresol)[6]	106-44-5	0.77	5.6
m-Cumenyl methylcarbamate[6]	64-00-6	0.056	1.4
Cyclohexanone	108-94-1	0.36	0.75 mg/l TCLP
o,p'-DDD	53-19-0	0.023	0.087
p,p'-DDD	72-54-8	0.023	0.087
o,p'-DDE	3424-82-6	0.031	0.087
p,p'-DDE	72-55-9	0.031	0.087
o,p'-DDT	789-02-6	0.0039	0.087
p,p'-DDT	50-29-3	0.0039	0.087
Dibenz(a,h)anthracene	53-70-3	0.055	8.2
Dibenz(a,e)pyrene	192-65-4	0.061	NA
1,2-Dibromo-3-chloropropane	96-12-8	0.11	15
1,2-Dibromoethane/ Ethylene dibromide	106-93-4	0.028	15
Dibromomethane	74-95-3	0.11	15
m-Dichlorobenzene	541-73-1	0.036	6.0
o-Dichlorobenzene	95-50-1	0.088	6.0
p-Dichlorobenzene	106-46-7	0.090	6.0
Dichlorodifluoromethane	75-71-8	0.23	7.2
1,1-Dichloroethane	75-34-3	0.059	6.0
1,2-Dichloroethane	107-06-2	0.21	6.0
1,1-Dichloroethylene	75-35-4	0.025	6.0
trans-1,2-Dichloroethylene	156-60-5	0.054	30
2,4-Dichlorophenol	120-83-2	0.044	14
2,6-Dichlorophenol	87-65-0	0.044	14
2,4-Dichlorophenoxyacetic acid/2,4-D	94-75-7	0.72	10
1,2-Dichloropropane	78-87-5	0.85	18
cis-1,3-Dichloropropylene	10061-01-5	0.036	18
trans-1,3-Dichloropropylene	10061-02-6	0.036	18
Dieldrin[6]	60-57-1	0.017	0.13
Diethylene glycol dicarbamate[6]	5952-26-1	0.056	1.4
Diethyl phthalate	84-66-2	0.20	28
p-Dimethylaminoazo-benzene	60-11-7	0.13	NA
2-4-Dimethyl phenol	105-67-9	0.036	14
Dimethyl phthalate	131-11-3	0.047	28
Dimetilan[6]	644-64-4	0.056	1.4
Di-n-butyl phthalate	84-74-2	0.057	28
1,4-Dinitrobenzene	100-25-4	0.32	2.3
4,6-Dinitro-o-cresol	534-52-1	0.28	160

§268.48 Table UTS Universal Treatment Standards
(Note NA means not applicable)

Regulated constituent-common name	CAS[1] No.	Wastewater standard	Nonwastewater standard
		Concentration in mg/2	Concentration in mg/kg3 unless noted as "mg/l TCLP"
2,4-Dinitrophenol	51-28-5	0.12	160
2,4-Dinitrotoluene	121-14-2	0.32	140
2,6-Dinitrotoluene	606-20-2	0.55	28
Di-n-octyl phthalate	117-84-0	0.017	28
Di-n-propylnitrosamine	621-64-7	0.40	14
1,4-Dioxane	123-91-1	12.0	170
Diphenylamine (difficult to distinguish from diphenylnitrosamine)	122-39-4	0.92	13
Diphenylnitrosamine (difficult to distinguish from diphenylamine)	86-30-6	0.92	13
1,2-Diphenylhydrazine	122-66-7	0.087	NA
Disulfoton	298-04-3	0.017	6.2
Dithiocarbamates (total)[6]	137-30-4	0.028	28
Endosulfan I	959-98-8	0.023	0.066
Endosulfan II	33213-65-9	0.029	0.13
Endosulfan sulfate	1031-07-8	0.029	0.13
Endrin	72-20-8	0.0028	0.13
Endrin aldehyde	7421-93-4	0.025	0.13
EPTC[6]	759-94-4	0.042	1.4
Ethyl acetate	141-78-6	0.34	33
Ethyl benzene	100-41-4	0.057	10
Ethyl cyanide (Propanenitrile)	107-12-0	0.24	360
Ethyl ether	60-29-7	0.12	160
bis(2-Ethylhexy) phthalate	117-81-7	0.28	28
Ethyl methacrylate	97-63-2	0.14	160
Ethylene oxide	75-21-8	0.12	NA
Famphur	52-85-7	0.017	15
Fluoranthene	206-44-0	0.068	3.4
Fluorene	86-73-7	0.059	3.4
Formetanate hydrochloride[6]	23422-53-9	0.056	1.4
Formparanate[6]	17702-57-7	0.056	1.4
Heptachlor	76-44-8	0.0012	0.066
Heptachlor epoxide	1024-57-3	0.016	0.066
Hexachlorobenzene	118-74-1	0.055	10
Hexachlorobutadiene	87-68-3	0.055	5.6
Hexachlorocyclo-pentadiene	77-47-4	0.057	2.4
HxCDDs (All Hexachloro-dibenzo-p-dioxins)	NA	0.000063	0.001
HxCDFs (All Hexachloro-dibenzofurans)	NA	0.000063	0.001
Hexachloroethane	67-72-1	0.055	30
Hexachloropropylene	1888-71-7	0.035	30
Indeno (1,2,3-c,d) pyrene	193-39-5	0.0055	3.4
Iodomethane	74-88-4	0.19	65
Isobutyl alcohol	78-83-1	5.6	170
Isodrin	465-73-6	0.021	0.066
Isolan[6]	119-38-0	0.056	1.4
Isosafrole	120-58-1	0.081	2.6
Kepone	143-50-0	0.0011	0.13
Methacrylonitrile	126-98-7	0.24	84
Methanol	67-56-1	5.6	0.75 mg/l TCLP
Methapyrilene	91-80-5	0.081	1.5
Methiocarb[6]	2032-65-7	0.056	1.4

§268.48 Table UTS Universal Treatment Standards
(Note NA means not applicable)

Regulated constituent-common name	CAS[1] No.	Wastewater standard	Nonwastewater standard
		Concentration in mg/2	Concentration in mg/kg[3] unless noted as "mg/l TCLP"
Methomyl[6]	16752-77-5	0.028	0.14
Methoxychlor	72-43-5	0.25	0.18
3-Methylcholanthrene	56-49-5	0.0055	15
4,4-Methylene bis(2-chloroaniline)	101-14-4	0.50	30
Methylene chloride	75-09-2	0.089	30
Methyl ethyl ketone	78-93-3	0.28	36
Methyl isobutyl ketone	108-10-1	0.14	33
Methyl methacrylate	80-62-6	0.14	160
Methyl methansulfonate	66-27-3	0.018	NA
Methyl parathion	298-00-0	0.014	4.6
Metolcarb	1129-41-5	0.056	1.4
Mexacarbate	315-18-4	0.056	1.4
Molinate	2212-67-1	0.042	1.4
Naphthalene	91-20-3	0.059	5.6
2-Naphthylamine	91-59-8	0.52	NA
o-Nitroaniline	88-74-4	0.27	14
p-Nitroaniline	100-01-6	0.028	28
Nitrobenzene	98-95-3	0.068	14
5-Nitro-o-toluidine	99-55-8	0.32	28
o-Nitrophenol	88-75-5	0.028	13
p-Nitrophenol	100-02-7	0.12	29
N-Nitrosodiethylamine	55-18-5	0.40	28
N-Nitrosodimethylamine	62-75-9	0.40	2.3
N-Nitroso-di-n-butylamine	924-16-3	0.40	17
N-Nitrosomethylethylamine	10595-95-6	0.40	2.3
N-Nitrosomorpholine	59-89-2	0.40	2.3
N-Nitrosopiperidine	100-75-4	0.013	35
N-Nitrosopyrrolidine	930-55-2	0.013	35
Oxamyl[6]	23135-22-0	0.056	0.28
Parathion	56-38-2	0.014	4.6
Total PCBs (sum of all PCB isomers, or all Aroclors)	1336-36-3	0.10	10
Pebulate[6]	1114-71-2	0.042	1.4
Pentachlorobenzene	608-93-5	0.055	10
PeCDDs (All Pentachloro-dibenzo-p-dioxins)	NA	0.000063	0.001
PeCDFs (All Pentachloro-dibenzofurans)	NA	0.000035	0.001
Pentachloroethane	76-01-7	0.055	6.0
Pentachloronitrobenzene	82-68-8	0.055	4.8
Pentachlorophenol	87-86-5	0.089	7.4
Phenacetin	62-44-2	0.081	16
Phenanthrene	85-01-8	0.059	5.6
Phenol	108-95-2	0.039	6.2
o-Phenylenediamine[6]	95-54-5	0.056	5.6
Phorate	298-02-2	0.021	4.6
Phthalic acid	100-21-0	0.055	28
Phthalic anhydride	85-44-9	0.055	28
Physostigmine[6]	57-47-6	0.056	1.4
Physostigmine salicylate	57-64-7	0.056	1.4
Promecarb[6]	2631-37-0	0.056	1.4
Pronamide	23950-58-5	0.093	1.5
Propham[6]	122-42-9	0.056	1.4
Propoxur[6]	114-26-1	0.056	1.4
Prosulfocarb[6]	52888-80-9	0.042	1.4
Pyrene	129-00-0	0.067	8.2
Pyridine	110-86-1	0.014	16
Safrole	94-59-7	0.081	22

§268.48 Table UTS Universal Treatment Standards
(Note NA means not applicable)

Regulated constituent-common name	CAS' No.	Wastewater standard	Nonwastewater standard
		Concentration in mg/2	Concentration in mg/kg3 unless noted as "mg/l TCLP"
Silvex (2,4,5-TP)	93-72-1	0.72	7.9
1,2,4,5-Tetrachloro-benzene	95-94-3	0.055	14
TCDDs (All Tetrachloro-dibenzo-p-dioxins)	NA	0.000063	0.001
TCDFs (All Tetrachloro-dibenzofurans)	NA	0.000063	0.001
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
1,1,2,2-Tetrachloro-ethane	79-34-6	0.057	6.0
Tetrachloroethylene	127-18-4	0.056	6.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.030	7.4
Thiodicarb[6]	59669-26-0	0.019	1.4
Thiophapate-methyl[6]	23564-05-8	0.056	1.4
Tirpate[6]	26419-73-8	0.056	0.28
Toluene	108-88-3	0.080	10
Toxaphene[6]	8001-35-2	0.0095	2.6
Triallate[6]	2303-17-5	0.042	1.4
Tribromomethane/Bromoform	75-25-2	0.63	15
1,2,4-Trichlorobenzene	120-82-1	0.055	19
1,1,1-Trichloroethane	71-55-6	0.054	6.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0
Trichloroethylene	79-01-6	0.054	6.0
Trichloromonofluoromethane	75-69-4	0.020	30
2,4,5-Trichlorophenol	95-95-4	0.18	7.4
2,4,6-Trichlorophenol	88-06-2	0.035	7.4
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T	93-76-5	0.72	7.9
1,2,3-Trichloropropane	96-18-4	0.85	30
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.057	30
Triethylamine[6]	101-44-8	0.081	1.5
tris-(2,3-Dibromopropyl) phosphate.[6]	126-72-7	0.11	0.10
Vernolate[6]	1929-77-7	0.042	1.4
Vinyl chloride	75-01-4	0.27	6.0
Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
II Inorganic Constituents			
Antimony	7440-36-0	1.9	2.1 mg/l TCLP
Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
Barium	7440-39-3	1.2	7.6 mg/l TCLP
Beryllium	7440-41-7	0.82	0.014 mg/l TCLP
Cadmium	7440-43-9	0.69	0.19 mg/l TCLP
Chromium (Total)	7440-47-3	2.77	0.86 mg/l TCLP
Cyanides (Total)[4]	57-12-5	1.2	590
Cyanides[5] (Amenable)[4]	57-12-5	0.86	30
Fluoride[5]	16984-48-8	35	NA
Lead	7439-92-1	0.69	0.37 mg/l TCLP
Mercury--Nonwastewater from Retort	7439-97-6	NA	0.20 mg/l TCLP

§268.48 Table UTS Universal Treatment Standards
(Note NA means not applicable)

Regulated constituent-common name	CAS[1] No.	Wastewater standard	Nonwastewater standard
		Concentration in mg/2	Concentration in mg/kg3 unless noted as "mg/l TCLP"
Mercury--All Others.....	7439-97-6	0.15	0.025 mg/l TCLP
Nickel.....	7440-02-0	3.98	5.0 mg/l TCLP
Selenium.....	7782-49-2	0.82	0.16 mg/l TCLP
Silver.....	7440-22-4	0.43	0.30 mg/l TCLP
Sulfide.....	18496-25-8	14	NA
Thallium.....	7440-28-0	1.4	0.078 mg/l TCLP
Vanadium[5].....	7440-62-2	4.3	0.23 mg/l TCLP
Zinc[5].....	7440-66-6	2.61	5.3 mg/l TCLP

Footnotes to Universal Treatment Table:

1 CAS means Chemical Abstract Services. When the waste code and/or regulated constituents are described as a combination of a chemical with its salts and/or esters the CAS number is given for the parent compound only.
2 Concentration standards for wastewaters are expressed in mg/l are based on analysis of composite samples.
3 Except for Metals (EP or TCLP) and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of 40 CFR part 264, subpart O or 40 CFR part 265, subpart O, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in 40 CFR 268.40(d). All concentration standards for nonwastewaters are based on analysis of grab samples.
4 Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using Method 9010 or 9012, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, as incorporated by reference in 40 CFR 260.11, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.
5 These constituents are not "underlying hazardous constituents" in characteristic wastes, according to the definition at Section 268.2(i).
6 Between August 26, 1996 and August 26, 1997, these constituents are not underlying hazardous constituents as defined at Section 268.2(i).

[59 FR 47982, Sept. 19, 1994; 60 FR 242, Jan. 3, 1995]
FR 15658, 4/8/96
62 FR 7600, 2/19/97

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(d) 40 CFR 268.50 (Subpart E), "Prohibitions on Storage", is incorporated by reference including subsequent amendments and editions.

SUBPART E - PROHIBITIONS ON STORAGE

268.50 Prohibitions on storage of restricted wastes.

(a) Except as provided for in this section, the storage of hazardous wastes restricted from land disposal under Subpart C of this part of RCRA Section 3004 is prohibited, unless the following conditions are met:
  (1) A generator stores such wastes in tanks or containers, or containment buildings on-site solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment, or disposal, and the generator complies with the requirements in Section 262.34 and parts 264 and 265 of this chapter. (A generator who is in existence on the effective date of a regulation under this part and who must store hazardous wastes for longer than 90 days due to the regulations under this part becomes an owner/operator of a storage facility and must obtain a RCRA permit. Such a facility may qualify for interim status upon compliance with the regulations governing interim status under 40 CFR 270.70).
  (2) An owner/operator of a hazardous waste treatment, storage or disposal facility stores such wastes in tanks, containers, or containment buildings solely for the purpose of the accumulation of such quantities of hazardous waste as necessary 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 begions, or such information for each tank is recorded and maintained in the operating record at that facility. Regardless of whether the tank itself is marked, an owner/operator must comply with the operating record requirements specified in Section 264.73 or Section 265.73.
  (3) A transporter stores manifested shipments of such wastes at a transfer facility for 10 days or less.

(b) An owner/operator of a treatment, storage or disposal facility may store such wastes for up to one year unless the Agency can demonstrate that such storage was not solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal.

(c) An owner/operator of a treatment, storage or disposal facility may store such wastes beyond one year; however, the owner/operator bears the burden of proving that such storage was solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment or disposal.

(d) If a generator's waste is exempt from a prohibition on the type of land disposal utilized for the waste (for example, because of an approved case-by-case extension under Section 268.5, and approved Section 268.6 petition, or a national capacity variance under subpart C), the prohibition in paragraph (a) of this section does not apply during the period of such exemption.

(e) The prohibition in paragraph (a) of this section does not apply to hazardous wastes that meet the treatment standards specified under Sections 268.41, 268.42 and 268.43, or the treatment standards specified under the variance in Section 268.44 or, where treatment standards have not been specified, is in compliance with the applicable prohibitions specified in Section 268.32 or RCRA Section 3004.

(f) Liquid hazardous wastes containing polycholorinated biphenyls (PCBs) at concentrations greater than or equal to 50 ppm must be stored at a facility that meets the requirements of 40 CFR 761.65(b) and must be removed from storage and treated or disposed as required by this part within one year of the date when such wastes are first placed into storage. The provisions of paragraph (c) of this section do not apply to such PCB wastes prohibited under Section 268.32 of this part.

(e) Appendices to 40 CFR Part 268 are incorporated by reference including subsequent amendments and editions.

APPENDIX I TO PART 268 -- TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP)

Note: The TCLP (Method 1311) is published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" EPA Publication SW-846, as incorporated by reference in §260.11. of this chapter.

[58 FR 46051, Aug. 31, 1993]

APPENDIX II TO PART 268 -- TREATMENT STANDARDS (AS CONCENTRATIONS IN THE TREATMENT RESIDUAL EXTRACT)

[Note: The treatment standards for F001-F005 Spent Solvent Wastes appear in Sections 268.41, 268.42, 268.43.]
[Note: The technologies shown are the basis of the treatment standards. They are not required to be used in meeting the treatment standards.]

	Waste Treatability Groups for for F001-F005 Spent Solvent Wastes (mg/l)			
Constituents of F001-F005 Spent Solvent Wastes	Wastewater	Technology Basis[1]	Waste Water Generated by Pharmaceutical Plant[2]	All Other[3]
Acetone	0.05	SS		0.59
n-Butyl Alcohol	5.00	SS		5.00
Carbon disulfide	1.05	SS		4.81
Carbon tetrachloride	0.05	B		0.96
Chlorobenzene	0.15	B&AC		0.05
Cresols (cresylic acid)	2.82	AC		0.75
Cyclohexanone	0.125	SS		0.75
1,2-Dichlorobenzene	0.65	B&AC		0.125
Ethyl acetate	0.05	SS		0.75
Ethylbenzene	0.05	B		0.053
Ethyl ether	0.05	SS		0.75
Isobutanol	5.00	SS		5.00
Methanol	0.25	SS		0.75
Methylene chloride	0.20	B	12.7	0.96
Methyl ethyl ketone	0.05	SS		0.75
Methyl isobutyl ketone	0.05	SS		0.33
Nitrobenzene	0.66	SS&AC		0.125
Pyridine	1.12	B&AC		0.33
Tetrachloroethylene	0.079	B		0.05
Toluene	1.12	B&AC		0.33
1,1,1-Trichloroethane	1.05	SS		0.41
1,1.2-Trichloro-1,2,2--trifluoroethane	1.05	SS		0.96
Trichloroethylene	0.062	B&AC		0.091
Trichlorofluoromethane	0.05	B		0.96
Xylene	0.05	AC		0.15

[1]In some instances other technologies achieved somewhat lower treatment values but waste characterization data were insufficient to identify separate treatability groups. Refer to the BDAT background document for a detailed explanation of the determination of the treatment standards.

SS = steam stripping.

B = biological treatment.

AC = activated carbon

[2]Wastewaters generated by pharmaceutical plants must be treated to the standards given for all other wastewaters except in the case of methylene chloride.

[3]The treatment standards in this treatability group are based on incineration.

APPENDIX III TO PART 268 -- LIST OF HALOGENATED ORGANIC COMPOUNDS REGULATED UNDER SECTION 268.32

In determining the concentration of HOCs in a hazardous waste for purposes of the Section 268.32 land disposal prohibition, EPA has defined the HOCs that must be included in the calculation as any compounds having a carbon-halogen bond which are listed in this Appendix (See Section 268.2). Apendix III to Part 268 consists of the following compounds:

Volatiles

Bromodichloromethane
Bromomethane
Carbon Tetrachloride
Chlorobenzene
2-Chloro-1,3-butadiene
Chlorodibromomethane
Chloroethane
2-Chloroethyl vinyl ether
Chloroform
Chloromethane
3-Chloropropene
1,2-Dibromo-3-chloropropane
1,2-Dibromomethane
Dibromomethane
Trans,1-,4-Dichloro-2-butene
Dichlorodifluoromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethylene
Trans-1,2-Dichloroethene
1,2-Dichloropropane
Trans-1,3-Dichloropropene
cis-1,3-Dichloropropene
Iodomethane
Methylene chloride
1,1,1,2-Tetrachloroethane
1,1,2,2-Tetrachloroethane
Tetrachloroethene
Tribromomethane
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethene
Trichloromonofluoromethane
1,2,3-Trichloropropane
Vinyl chloride

Semivolatiles

Bis(2-chloroethoxy)ethane
Bis(2-chloroethyl)ether
Bis(2-chloroisopropyl) ether
p-Chloroaniline
Chlorobenzilate
p-Chloro-m-cresol
2-Chloronaphthalene
2-Chlorophenol
3-Chloropropionitrile
m-Dichlorobenzene
o-Dichlorobenzene
3,3'-Dichlorobenzidine
2,4-Dichlorophenol
2,6-Dichlorophenol
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Hexachloropropene
4,4'Methylenebis(2-chloroaniline)

Pentachlorobenzene
Pentachloroethane
Pentachloronitrobenzene
Pentachlorophenol
Pronamide
1,2,4,5-Tetrachlorobenzene
2,3,4,6-Tetrachlorophenol
1,2,4-Trichlorobenzene
2,4,5-Trichlorophenol
2,4,6-Trichlorophenol
Tris(2,3-dibromopropyl)phosphate

Organochlorine Pesticides

Aldrin
alpha-BHC
beta-BHC
delta-BHC
gamma-BHC
Chlordane
DDD
DDE
DDT
Dieldrin
Endosulfan I
Endosulfan II
Endrin
Endrin aldehyde
Heptachlor
Heptachlor epoxide
Isodrin
Kepone
Methoxyclor
Toxaphene

Phenoxyacetic Acid Herbicides

2,4-Dichlorophenoxyacetic acid
Silvex
2,4,5-T

PCBs

Aroclor 1016
Aroclor 1221
Aroclor 1232
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
PCBs not otherwise specified

Dioxins and Furans

Hexachlorodibenzo-p-dioxins
Hexachlorodibenzofuran
Pentachlorodibenzo-p-dioxins
Pentachlorodibenzofuran
Tetrachlorodibenzo-p-dioxins
Tetrachlorodibenzofuran
2,3,7,8-Tetrachlorodibenzo-p-dioxin

APPENDIX IV TO PART 268--WASTES EXCLUDED FROM LAB PACKS UNDER THE ALTERNATIVE TREATMENT STANDARDS OF SECTION 268.42(c).

Hazardous waste with the following EPA Hazardous Waste Codes may not be placed in lab packs under the alternative lab pack treatment standards of Section 268.42(c):

D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, U151.

APPENDIX V--TO PART 268-- Reserved:

APPENDIX VI--RECOMMENDED TECHNOLOGIES TO ACHIEVE
DEACTIVATION OF CHARACTERISTICS IN SECTION 268.42

The treatment standard for many subcategories of D001, D002, and D003 wastes as well as for K044, K045, and K047 wastes is listed in 268.42 simply as "Deactivation to remove the characteristics of ignitability, corrosivity, and reactivity". EPA has determined that many technologies, when used alone or in combination, can achieve this standard. The following appendix presents a partial list of these technologies, utilizing the five letter technology codes established in 40 CFR 268.42 Table 1. Use of these specific technologies is not mandatory and does not preclude direct reuse, recovery and/or the use of other pretreatment technologies provided deactivation is achieved and these alternative methods are not performed in units designated as land disposal.

Waste code/subcategory	Nonwaste waters	Wastewaters
D001 Ignitable Liquids based on 261.21(a)(1) -- Low TOC Nonwastewater Subcategory (containing 1% to <10% TOC)	RORGS INCIN WETOX CHOXD BIODG	n.a.
D001 Ignitable Liquids based on 261.21(a)(1) -- Ignitable Wastewater Subcategory (containing <1% TOC)	n.a.	RORGS INCIN WETOX CHOXD BIODG
D001 Compressed Gases based on 261.21(A)(3)	RCGAS INCIN FSUBS ADGAS fb.INCIN ADGAS fb.(CHOXD or CHRED)	n.a.
D001 Ignitable Reactives based on 261.21(a)(2)	WTRRX CHOXD CHRED STABL INCIN	n.a.
D001 Ignitable Oxidizers based on 261.21(a)(4)	CHRED INCIN	CHRED INCIN
D002 Acid Subcategory based on 261.22(a)(1) with pH less than or equal to 2	RCORR NEUTR INCIN	NEUTR INCIN
D002 Alkaline Subcategory based on 261.22(a)(1) with pH greater than or equal to 12.5	NEUTR INCIN	NEUTR INCIN
D002 Other Corrosives based on 261.22(a)(2)	CHOXD CHRED INCIN STABL	CHOXD CHRED
D003 Water Reactives based on 261.23(a) (2), (3), and (4)	INCIN WTRRX CHOXD CHRED	n.a.

Note: "n.a." stands for "not applicable"; "fb." stands for "followed by".

APPENDIX VI (continued)

Waste code/subcategory	Nonwaste waters	Wastewaters
D003 Reactive Sulfides based on 261.23(a)(5)	CHOXD CHRED INCIN STABL	CHOXD CHRED BIODG INCIN
D003 Explosives based on 261.23(a) (6), (7), and (8)	INCIN CHOXD CHRED	INCIN CHOXD CHRED BIODG CARBN
D003 Other Reactives based on 261.23(a)(1)	INCIN CHOXD CHRED	INCIN CHOXD CHRED BIODG CARBN
K044 Wastewater treatment sludges from the manufacturing and processing of explosives	CHOXD CHRED INCIN	CHOXD CHRED BIODG CARBN INCIN
K045 Spent carbon from the treatment of wastewaters containing explosives	CHOXD CHRED INCIN	CHOXD CHRED BIODG CARBN INCIN
K047 Pink/red water from TNT operations	CHOXD CHRED INCIN	CHOXD CHRED BIODG CARBN INCIN

Note: "n.a." stands for "not applicable"; "fb." stands for "followed by".

APPENDIX VII

TABLE 1 -- EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED IN THE LDRs[a]

[Comprehensive List]

Waste code	Waste category	Effective date
California list	Liquid hazardous wastes, including free liquids associated with solid or sludge, containing free cyanides at concentrations greater than or equal to 1,000 mg/l or certain metals or compounds of these metals greater than or equal to the prohibition levels.	July 8, 1987
California list	Liquid (aqueous) hazardous wastes having a pH less than or equal to 2.	July 8, 1987
California list	Dilute HOC wastewaters, defined as HOC-waste mixtures that are primarily water and that contain greater than or equal to 1,000 mg/l but less than 10,000 mg/l.	July 8, 1987
California list	Liquid hazardous waste containing PCBs greater than or equal to 50 ppm.	July 8, 1987

[Comprehensive List]

Waste code	Waste category	Effective date
California list	Other liquid and non-liquid hazardous wastes containing HOCs in total concentration greater than or equal to 1,000 mg.	Nov. 8, 1988
D001	All	Aug. 8, 1990
D002	All	Aug. 8, 1990
D003	All	Aug. 8, 1990
D004	Wastewater	Aug. 8, 1990
D004	Nonwastewater	May 8, 1992
D005	All	Aug. 8, 1990
D006	All	Aug. 8, 1990
D007	All	Aug. 8, 1990
D008	Lead materials	May 8, 1992
	before secondary smelting	Aug. 8, 1990
		May 8, 1992
		Aug. 8, 1990
D008	All others	Aug. 8, 1990
D009	Nonwastewater	May. 8, 1992
D009	All others	Aug. 8, 1990
D010	All	Aug. 8, 1990
D011	All	Aug. 8, 1990
D012	All	Aug. 8, 1990
D013	All	Aug. 8, 1990
D014	All	Aug. 8, 1990
D015	All	Aug. 8, 1990
D016	All	Aug. 8, 1990
D017	All	Aug. 8, 1990
F001	Small quantity generators, CERCLA response/-RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	Nov. 8, 1988
F001	All others	Nov. 8, 1986
F002(1,1,2-trichloroethane)[c]	Wastewater and Nonwastewater	Aug. 8, 1990
F002	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	Nov. 8, 1988

APPENDIX VII (Continued)

TABLE 1 -- EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED IN THE LDRs[a]

[Comprehensive List]

Waste code	Waste category	Effective date
F002	All others	Nov. 8, 1986
F003	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	Nov 8, 1988
F003	All others	Nov. 8, 1986
F004	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	Nov. 8, 1988
F004	All others	Nov. 8, 1986
F005 (benzene, 2-ethoxy anthanol, 2-nitropropane)	Wastewater or Nonwastewater	Aug. 8, 1990
F005	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	Nov. 8, 1986
F005	All others	Nov. 8, 1986
F006	Wastewater	Aug. 8, 1990
F006	Nonwastewater	Aug. 8, 1988
F006 (cyanides)	Nonwastewater	July 8, 1989
F007	All	July 8, 1989
F008	All	July 8, 1989
F009	All	July 8, 1989
F010	All	June 8, 1989
F011 (cyanides)	Nonwastewater	Dec. 8, 1989
F011	All others	July 8, 1989
F012 (cyanides)	Nonwastewater	Dec. 8, 1989
F012	All others	July 8, 1989
F019	All	Aug. 8, 1990
F020	All	Nov. 8, 1988

[Comprehensive List]

Waste Code	Waste category	Effective date
F021	All	Nov. 8, 1988
F022	All	Nov. 8, 1988
F023	All	Nov. 8, 1988
F024 (metals)	Wastewater	June 8, 1989
F024 (metals)	Nonwastewater	Aug. 8, 1990
F024[b]	All others	June 8, 1989
F025	All	Aug. 8, 1990
F026	All	Nov. 8, 1988
F027	All	Nov. 8, 1988
F028	All	Nov. 8, 1988
F039	Wastewater	Aug. 8, 1990
F039[b]	Nonwastewater	May 8, 1992
K001 (organics)	All	Aug. 8, 1988
K001	All others	Aug. 8, 1988
K002	All	Aug. 8, 1990
K003	All	Aug. 8, 1990
K004[c]	Wastewater	Aug. 8, 1990
K004	Nonwastewater	Aug. 8, 1988
K005[c]	Wastewater	Aug. 8, 1990
K005	Nonwastewater	June 8, 1990
K006	All	Aug. 8, 1990
K007[c]	Wastewater	Aug. 8, 1990
K007	Nonwastewater	June 8, 1989
K008[c]	Wastewater	Aug. 8, 1990
K008	Nonwastewater	Aug. 8, 1988
K009	All	June 8, 1989
K010	All	June 8, 1989
K011	Wastewater	Aug. 8, 1990
K011	Nonwastewater	June 8, 1989
K013	Wastewater	Aug. 8, 1990
K013	Nonwastewater	June 8, 1989
K014	Wastewater	Aug 8, 1990
K014	Nonwastewater	June 8, 1988
K015	Wastewater	Aug. 8, 1988
K015	Nonwastewater	Aug. 8, 1990
K016	All	Aug. 8, 1988
K017	All	Aug. 8, 1990
K018	All	Aug. 8, 1988
K019	All	Aug. 8, 1988
K020	All	Aug. 6, 1988
K021[c]	Wastewater	Aug. 8, 1990
K021	Nonwastewater	Aug. 8, 1988
K022	Wastewater	Aug. 8, 1990
K022	Nonwastewater	Aug. 8, 1988
K023	All	June 8, 1989
K024	All	Aug. 8, 1988
K025[c]	Wastewater	Aug. 8, 1990
K025	Nonwastewater	Aug. 8, 1988
K026	All	Aug. 8, 1990
K027	All	June 8, 1989
K028 (metals)	Nonwastewater	Aug. 8, 1990
K028	All others	June 8, 1989
K029	Wastewater	Aug. 8, 1990
K029	Nonwastewater	June 8, 1989
K030	All	Aug. 8, 1988

APPENDIX VII (Continued)

TABLE 1 -- EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED IN THE LDRs[a]

[Comprehensive list]

Waste code	Waste category	Effective date
K031	Wastewater	Aug. 8, 1990
K031	Nonwastewater	May 8, 1992
K032	All	Aug. 8, 1990
K033	All	Aug. 8, 1990
K034	All	Aug 8, 1990
K035	All	Aug. 8, 1990
K036[c]	Wastewater	June 8, 1989
K036[b]	Nonwastewater.	Aug. 8, 1988
K037	Wastewater	Aug. 8, 1988
K037	Nonwastewater.	Aug. 8, 1988
K038	All	June 8, 1989
K039	All	June 8, 1989
K040	All	June 8, 1989
K041	All	Aug. 8, 1990
K042	All	Aug. 8, 1990
K043[c]	All	June 8, 1989
K044[c]	All	Aug. 8, 1988
K045	All	Aug. 8, 1988
K046(Non-reactive)	Nonwastewater..	Aug. 8, 1988
K046[c]	All others	Aug. 8, 1990
K047	All	Aug. 8, 1988
K048	Wastewater	Aug. 8, 1990
K048	Nonwastewater..	Nov. 8, 1990
K049	Wastewater	Aug. 8, 1990
K049	Nonwastewater..	Nov. 8, 1990
K050	Wastewater	Aug. 8, 1990
K050	Nonwastewater..	Nov. 8, 1990
K051	Wastewater	Aug. 8, 1990
K051	Nonwastewater..	Nov. 8, 1990
K052	Wastewater	Aug. 8, 1990
K052	Nonwastewater..	Nov. 8, 1990
K060[c]	Wastewater	Aug. 8, 1990
K060	Nonwastewater..	Aug. 8, 1988
K061	Wastewater	Aug. 8, 1990
K061 (low zinc) (interim standard for high zinc remains in effect until August 7, 1991).	Nonwastewater..	Aug. 8, 1988
K062	All	Aug. 8, 1988
K069 (Non-Calcium Sulfate)[a]	Nonwastewater..	Aug. 8, 1988
K069	All others	Aug. 8, 1990
K071	All	Aug. 8, 1990
K073	All	Aug. 8, 1990
K083	All	Aug. 8, 1990
K084	Wastewater	Aug. 8, 1990

[Comprehensive List]

Waste Code	Waste category	Effective date
K084	Nonwastewater..	May 8, 1992
K085	All	Aug. 8, 1990
K086 (organics)[b]	All	Aug. 8, 1988
K086	All others	June 8, 1988
K087	All	Aug. 8, 1988
K093	All	June 8, 1989
K094	All	June 8, 1989
K095	Wastewater	Aug. 8, 1990
K095	Nonwastewater..	June 8, 1989
K096	Wastewater	Aug. 8, 1990
K096	Nonwastewater..	June 8, 1989
K097	All	Aug. 8, 1990
K098	All	Aug. 8, 1990
K099	All	Aug. 8, 1988
K100[c]	Wastewater	Aug. 8, 1990
K100	Nonwastewater..	Aug. 8, 1988
K101 (organics).	Wastewater	Aug. 8, 1988
K101 (metals)	Nonwastewater..	May. 8, 1992
K101 (organics).	Wastewater	Aug. 8, 1988
K101 (metals)	Wastewater	Aug. 8, 1990
K102 (organics).	Nonwastewater..	Aug. 8, 1988
K102 (metals)	Nonwastewater..	May 8, 1992
K102 (organics).	All	Aug. 8, 1988
K102 (metals)	All	Aug. 8, 1988
K103	All	Aug. 8, 1990
K104	Wastewater	Aug. 8, 1990
K105	Nonwastewater..	May 8, 1992
K106	All	June 8, 1989
K106	All	June 8, 1989
K113	All	June 8, 1989
K114	All	June 8, 1989
K115	All	Aug. 8, 1990
K116	All	Aug. 8, 1990
P001	All	Aug. 8, 1990
P002	All	Aug. 8, 1990
P003	All	Aug. 8, 1990
P004	All	Aug. 8, 1990
P005	All	Aug. 8, 1990
P006	All	Aug. 8, 1990
P007	All	Aug. 8, 1990
P008	Wastewater	Aug. 8, 1990
P009	Nonwastewater..	May 8, 1992
P010	Wastewater	Aug. 8, 1990
P010	Nonwastewater..	May 8, 1992
P011	Wastewater	Aug. 8, 1990
P011	Nonwastewater..	May 8, 1992
P012	Nonwastewater..	Aug. 8, 1990
P012	All others	June 8, 1989
P013 (barium)	All	Aug. 8, 1990
P013	All	Aug. 8, 1990
P014	All	Aug. 8, 1990
P015	All	Aug. 8, 1990
P016	All	Aug. 8, 1990
P017	All	Aug. 8, 1990
P018	All	Aug. 8, 1990
P020	All	Aug. 8, 1990

APPENDIX VII (Continued)

TABLE 1 -- EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED IN THE LDRs[a]

[Comprehensive List]

Waste code	Waste category	Effective date
P021	All	June 8, 1989
P022	All	Aug. 8, 1990
P023	All	Aug. 8, 1990
P024	All	Aug. 8, 1990
P026	All	Aug. 8, 1990
P027	All	Aug. 8, 1990
P028	All	Aug. 8, 1990
P029	All	June 8, 1989
P030	All	June 8, 1989
P031	All	Aug. 8, 1990
P033	All	Aug. 8, 1990
P034	All	Aug. 8, 1990
P036	Wastewater	Aug. 8, 1990
P036	Nonwastewater	May 8, 1992
P037	All	Aug. 8, 1990
P038	Wastewater	Aug. 8, 1990
P038	Nonwastewater	May 8, 1992
P039	All	June 8, 1989
P040	All	June 8, 1989
P041	All	June 8, 1989
P042	All	Aug. 8, 1990
P043	All	June 8, 1989
P044	All	June 8, 1989
P045	All	Aug. 8, 1990
P046	All	Aug. 8, 1990
P047	All	Aug. 8, 1990
P048	All	Aug. 8, 1990
P049	All	Aug. 8, 1990
P050	All	Aug. 8, 1990
P051	All	Aug. 8, 1990
P054	All	Aug. 8, 1990
P056	All	Aug. 8, 1990
P057	All	Aug. 8, 1990
P058	All	Aug. 8, 1990
P059	All	Aug. 8, 1990
P060	All	Aug. 8, 1990
P062	All	June 8, 1989
P063	All	June 8, 1989
P064	All	Aug. 8, 1990
P065	Wastewater	Aug. 8, 1990
P065	Nonwastewater	May 8, 1992
P066	All	Aug. 8, 1990
P067	All	Aug. 8, 1990
P068	All	Aug. 8, 1990
P069	All	Aug. 8, 1990
P070	All	Aug. 8, 1990
P071	All	June 8, 1989
P072	All	Aug. 8, 1990
P073	All	Aug. 8, 1990
P074	All	June 8, 1989
P075	All	Aug. 8, 1990
P076	All	Aug. 8, 1990
P077	All	Aug. 8, 1990
P078	All	Aug. 8, 1990
P081	All	Aug. 8, 1990
P082	All	Aug. 8, 1990
P084	All	Aug. 8, 1990

[Comprehensive List]

Waste Code	Waste category	Effective date
P085	All	June 8, 1989
P087	All	May 8, 1992
P088	All	Aug. 8, 1990
P089	All	June 8, 1989
P092	Nonwastewater	Aug. 8, 1990
P092	All	May 8, 1992
P093	All	Aug. 8, 1990
P094	All	June 8, 1989
P095	All	Aug. 8, 1990
P096	All	Aug. 8, 1990
P097	All	June 8, 1989
P098	All	June 8, 1989
P099 (silver)	Wastewater	Aug. 8, 1990
P099	All others	June 8, 1989
P101	All	Aug. 8, 1990
P102	All	Aug. 8, 1990
P103	All	Aug. 8, 1990
P104 (silver)	Wastewater	Aug. 8, 1990
P104	All others	June 8, 1989
P105	All	Aug. 8, 1990
P106	All	June 8, 1989
P108	All	Aug. 8, 1990
P109	All	June 8, 1989
P110	All	Aug. 8, 1990
P111	All	June 8, 1989
P112	All	Aug 8, 1990
P113	All	Aug 8, 1990
P114	All	Aug 8, 1990
P115	All	Aug 8, 1990
P116	All	Aug 8, 1989
P118	All	Aug 8, 1990
P119	All	Aug 8, 1990
P120	All	Aug 8, 1990
P121	All	June 8, 1989
P122	All	Aug 8, 1990
P123	All	Aug. 8, 1990
U001	All	Aug 8, 1990
U002	All	Aug. 8, 1990
U003	All	Aug. 8, 1990
U004	All	Aug. 8, 1990
U005	All	Aug. 8, 1990
U006	All	Aug. 8, 1990
U007	All	Aug. 8, 1990
U008	All	Aug. 8, 1990
U009	All	Aug. 8, 1990
U010	All	Aug 8, 1990
U011	All	Aug 8, 1990
U012	All	Aug 8, 1990
U014	All	Aug 8, 1990
U015	All	Aug 8, 1990
U016	All	Aug 8, 1990
U017	All	Aug 8, 1990
U018	All	Aug 8, 1990
U019	All	Aug 8, 1990
U020	All	Aug 8, 1990
U021	All	Aug 8, 1990
U022	All	Aug 8, 1990
U023	All	Aug 8, 1990

APPENDIX VII (Continued)

TABLE 1 -- EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED IN THE LDRs[a]

[Comprehensive List]

Waste code	Waste category	Effective date
U024	All	Aug 8, 1990
U025	All	Aug 8, 1990
U026	All	Aug 8, 1990
U027	All	Aug 8, 1990
U028	All	June 8, 1989
U029	All	Aug 8, 1990
U030	All	Aug 8, 1990
U031	All	Aug 8, 1990
U032	All	Aug 8, 1990
U033	All	Aug 8, 1990
U034	All	Aug 8, 1990
U035	All	Aug 8, 1990
U036	All	Aug 8, 1990
U037	All	Aug 8, 1990
U038	All	Aug 8, 1990
U039	All	Aug 8, 1990
U041	All	Aug 8, 1990
U042	All	Aug 8, 1990
U043	All	Aug 8, 1990
U044	All	Aug 8, 1990
U045	All	Aug 8, 1990
U046	All	Aug 8, 1990
U047	All	Aug 8, 1990
U048	All	Aug 8, 1990
U049	All	Aug 8, 1990
U050	All	Aug 8, 1990
U051	All	Aug 8, 1990
U052	All	Aug 8, 1990
U053	All	Aug 8, 1990
U055	All	Aug 8, 1990
U056	All	Aug 8, 1990
U057	All	Aug 8, 1990
U058	All	June 8, 1989
U059	All	Aug 8, 1990
U060	All	Aug 8, 1990
U061	All	Aug 8, 1990
U062	All	Aug 8, 1990
U063	All	Aug 8, 1990
U064	All	Aug 8, 1990
U066	All	Aug 8, 1990
U067	All	Aug 8, 1990
U068	All	Aug 8, 1990
U069	All	June 8, 1989
U070	All	Aug 8, 1990
U071	All	Aug 8, 1990
U072	All	Aug 8, 1990
U073	All	Aug 8, 1990
U074	All	Aug 8, 1990
U075	All	Aug 8, 1990
U076	All	Aug 8, 1990
U077	All	Aug 8, 1990
U078	All	Aug 8, 1990
U079	All	Aug 8, 1990
U080	All	Aug 8, 1990
U081	All	Aug 8, 1990
U082	All	Aug 8, 1990
U083	All	Aug 8, 1990
U084	All	Aug 8, 1990

[Comprehensive List]

Waste Code	Waste category	Effective date
U085	All	Aug 8, 1990
U086	All	Aug 8, 1990
U087	All	June 8, 1989
U088	All	June 8, 1989
U089	All	Aug 8, 1990
U090	All	Aug 8, 1990
U091	All	Aug 8, 1990
U092	All	Aug 8, 1990
U093	All	Aug 8, 1990
U094	All	Aug 8, 1990
U095	All	Aug 8, 1990
U096	All	Aug 8, 1990
U097	All	Aug 8, 1990
U098	All	Aug 8, 1990
U099	All	Aug 8, 1990
U101	All	Aug 8, 1990
U102	All	June 8, 1989
U102	All	June 8, 1989
U103	All	Aug 8, 1990
U105	All	Aug 8, 1990
U106	All	Aug 8, 1990
U107	All	June 8, 1989
U108	All	Aug 8, 1990
U109	All	Aug 8, 1990
U110	All	Aug 8, 1990
U111	All	Aug 8, 1990
U112	All	Aug 8, 1990
U113	All	Aug 8, 1990
U114	All	Aug 8, 1990
U115	All	Aug 8, 1990
U116	All	Aug 8, 1990
U117	All	Aug 8, 1990
U118	All	Aug 8, 1990
U119	All	Aug 8, 1990
U120	All	Aug 8, 1990
U121	All	Aug 8, 1990
U122	All	Aug 8, 1990
U123	All	Aug 8, 1990
U124	All	Aug 8, 1990
U125	All	Aug 8, 1990
U126	All	Aug 8, 1990
U127	All	Aug 8, 1990
U128	All	Aug 8, 1990
U129	All	Aug 8, 1990
U130	All	Aug 8, 1990
U131	All	Aug 8, 1990
U132	All	Aug 8, 1990
U133	All	Aug 8, 1990
U134	All	Aug 8, 1990
U135	All	Aug 8, 1990
U136	Wastewater	Aug 8, 1990
U136	Nonwastewater	May 8, 1992
U137	All	Aug 8, 1990
U138	All	Aug 8, 1990
U140	All	Aug 8, 1990
U141	All	Aug 8, 1990
U142	All	Aug 8, 1990
U143	All	Aug 8, 1990
U144	All	Aug 8, 1990

TABLE 1 -- EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED IN THE LDRs[a]

[Comprehensive List] [Comprehensive List]

Waste code	Waste category	Effective date	Waste Code	Waste category	Effective date
U145	All	Aug 8, 1990	U191	All	Aug 8, 1990
U146	All	Aug 8, 1990	U192	All	Aug 8, 1990
U147	All	Aug 8, 1990	U193	All	Aug 8, 1990
U148	All	Aug 8, 1990	U194	All	Aug 8, 1990
U149	Wastewater	Aug 8, 1990	U196	All	Aug 8, 1990
U150	Nonwastewater	Aug 8, 1990	U197	All	Aug 8, 1990
U151	All	Aug 8, 1990	U200	All	Aug 8, 1990
U151	All	Aug 8, 1990	U201	All	Aug 8, 1990
U152	All	Aug 8, 1990	U202	All	Aug 8, 1990
U153	All	May 8, 1992	U203	All	Aug 8, 1990
U154	All	Aug 8, 1990	U204	All	Aug 8, 1990
U155	All	Aug. 8, 1990	U205	All	Aug 8, 1990
U156	All	Aug 8, 1990	U206	All	Aug 8, 1990
U157	All	Aug 8, 1990	U207	All	Aug 8, 1990
U158	All	Aug 8, 1990	U208	All	Aug 8, 1990
U159	All	Aug 8, 1990	U209	All	Aug 8, 1990
U160	All	Aug 8, 1990	U210	All	Aug 8, 1990
U161	All	Aug 8, 1990	U211	All	Aug 8, 1990
U162	All	Aug 8, 1990	U213	All	Aug 8, 1990
U163	All	Aug 8, 1990	U214	All	Aug 8, 1990
U164	All	Aug 8, 1990	U215	All	Aug 8, 1990
U165	All	Aug 8, 1990	U216	All	Aug 8, 1990
U166	All	Aug 8, 1990	U217	All	Aug 8, 1990
U167	All	Aug 8, 1990	U218	All	Aug 8, 1990
U168	All	Aug 8, 1990	U219	All	Aug 8, 1990
U169	All	Aug 8, 1990	U220	All	Aug. 8, 1990
U170	All	Aug 8, 1990	U221	All	June 8, 1989
U171	All	Aug 8, 1990	U222	All	Aug. 8, 1990
U172	All	Aug 8, 1990	U223	All	June 8, 1989
U173	All	Aug 8, 1990	U225	All	Aug. 8, 1990
U174	All	Aug 8, 1990	U226	All	Aug. 8, 1990
U176	All	Aug 8, 1990	U227	All	Aug. 8, 1990
U177	All	Aug 8, 1990	U228	All	Aug. 8, 1990
U178	All	Aug 8, 1990	U234	All	Aug. 8, 1990
U179	All	Aug 8, 1990	U235	All	June 8, 1989
U180	All	Aug 8, 1990	U236	All	Aug. 8, 1990
U181	All	Aug 8, 1990	U237	All	Aug. 8, 1990
U182	All	Aug 8, 1990	U238	All	Aug. 8, 1990
U183	All	Aug 8, 1990	U239	All	Aug. 8, 1990
U184	All	Aug 8, 1990	U240	All	Aug. 8, 1990
U185	All	Aug 8, 1990	U243	All	Aug. 8, 1990
U186	All	Aug 8, 1990	U244	All	Aug. 8, 1990
U187	All	Aug 8, 1990	U246	All	Aug. 8, 1990
U188	All	Aug 8, 1990	U247	All	Aug. 8, 1990
U189	All	Aug 8, 1990	U248	All	Aug. 8, 1990
U190	All	June 8, 1989	U249	All	Aug. 8, 1990

[a] This table does not include mixed radioactive wastes (from the First, Second, and Third rules) which are receiving a national capacity variance until May 8, 1992, for all applicable treatment technologies. This table also does not include contaminated soil and debris wastes.

[b] The standard has been revised in the Third Third Final Rule.

[c] No land disposal standard has been revised in the Third Third Final Rule.

Table 2--Summary of Effective Dates of Land Disposal Restrictions for Contaminated Soil and Debris (CSD).

	Restricted hazardous waste in CSD	Effective date
1.	Solvent-(F001-F005) and dioxin-(F020-F023 and F026-F028) containing soil and debris from CERCLA response of RCRA corrective actions.	Nov. 8, 1990
2.	Soil and debris not from CERCLA response or RCRA corrective actions contaminated with less than 1% total solvents (F001-F005) or dioxins (F020-F023 and F026-F028).	Nov. 8, 1988
3.	Soil and debris contaminated with California list HOCs from CERCLA response or RCRA corrective actions.	Nov. 8, 1990
4.	Soil and debris contaminated with California list HOCs not from CERCLA response or RCRA corrective actions.	July 8, 1989
5.	All soil and debris contaminated with First Third wastes for which treatment standards are based on incinceration.	Aug. 8, 1990
6.	All soil and debris contaminated with Second Third wastes for which treatment standards are based on incineration.	June 8, 1991
7.	All soil and debris contaminated with Third Third wastes or, First or Second Third "soft hammer" wastes which had treatment standards promulgated in the Third Third rule, for which treatment standards are based on incinceration, vitrification, or mercury retorting, acid leaching followed by chemical precipitation, or thermal recovery of metals; as well as all inorganic solids debris contaminated with D004-D011 wastes, and all soil and debris contaminated with mixed RCRA/radioactive wastes.	May 8, 1992

Note: 1. Appendix VII is provided for the convenience of the reader.
2. Contaminated Soil and Debris Rule will be promulgated in the future.

APPENDIX VIII -- NATIONAL CAPACITY LDR VARIANCES FOR UIC WASTES[a] COMPREHENSIVE LIST

Waste code	Waste category	Effective date
F001-F005	All spent F001-F005 solvent containing less than 1 percent total F001-F005 solvent constituents.	August 8, 1990
California list	Liquid hazardous wastes, including free liquids associated with any solid or sludge, containing free cyanides at concentrations greater than or equal to 1,000 mg/l, or containing certain metals or compounds of these metals greater than or equal to the prohibition levels.	August 8, 1990
California list	Liquid hazardous waste having a pH less than or equal to 2	August 8, 1990
California list	Hazardous wastes containing HOCs in total concentration less than 10,000 mg/l but greater than or equal to 1,000 mg/l.	August 8, 1990
D002[b]	All	May 8, 1992
D003 (cyanides)	All	May 8, 1992
D003 (sulfides)	All	May 8, 1992
D003 (explosives, reactives)	All	May 8, 1992
D007	All	May 8, 1992
D009	Nonwastewater	May 8, 1992
F011	All	June 8, 1991
F039	Wastewater	May 8, 1992
K009	Wastewater	June 8, 1991
K011	Nonwastewater	June 8, 1991
K011	Wastewater	May 8, 1992
K013	Nonwastewater	June 8, 1991
K013	Wastewater	May 8, 1992
K014	All	May 8, 1992
K016 (dilute)	All	June 8, 1991
K049	All	August 8, 1990
K050	All	August 8, 1990
K051	All	August 8, 1990
K052	All	August 8, 1990
K062	All	August 8, 1990
K071	All	August 8, 1990
K104	All	August 8, 1990

[a] Wastes that are deep well disposed on-site receive a six-month variance, with restrictions effective in November, 1990.

[b] Deepwell injected D002 liquids with a pH less than 2 must meet the California List treatment standards on August 8, 1990.

NOTE: This table is provided for the convenience of the reader.

APPENDIX IX TO PART 268--EXTRACTION PROCEDURE (EP) TOXICITY TEST METHOD AND STRUCTURAL INTEGRITY TEST (METHOD 1310)

Note: The EP (Method 1310) is published in "Test Methods for Evaluating Solid Waste Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of this chapter.

APPENDIX X TO PART 268–RECORDKEEPING, NOTIFICATION, AND/OR CERTIFICATION REQUIREMENTS

Entity	Scenario	Frequency	Recipient of notification	Recordkeeping, notification, and/or certification requirements.
I. Generator	A. Waste does not meet applicable treatment standards or exceeds applicable prohibition levels (see § 268.7(a)(1)).	Each shipment	Treatment or storage facility	Notice must include: -EPA hazardous waste number. -Constituents of concern -Treatability group. -Manifest number. -Waste analysis data (where available).
	B. Waste can be disposed of without further treatment (meets applicable treatment standards or does not exceed prohibition levels upon generation) (see § 268.7(a)(2)).	Each shipment	Land disposal facility	Notice and certification statement that waste meets applicable treatment standards or applicable prohibition levels. Notice must include: -EPA hazardous waste number. -Constituents of concern. -Treatability group. -Manifest number. -Waste analysis date (where available). Certification statement required under § 268.7(a)(2)(ii) that waste complies with treatment standards and prohibitions.
	C. Waste is subject to exemption from a prohibition on the type of land disposal utilized for the waste, such as a case-by-case extension under § 268.5, an exemption under § 268.6, or a nationwide capacity variance (see § 268.7(a)(3)).	Each shipment	Receiving facility	Notice must include: -Statement that waste is not prohibited. from land disposal. -EPA hazardous waste number. -Constituents of concern. -Treatability group. -Manifest number. -Waste analysis data (where available). -Date the waste is subject to the prohibitions.
	D. Waste is being accumulated in tanks or containers regulated under 40 CFR 262.34 and is being treated in such tanks or containers to meet applicable treatment standards (see § 268.7(a)(4)).	Minimum of 30 days prior to treatment activity	EPA Regional Administrator (or designated representative) or authorized State. Delivery must be verified.	Generator must develop, keep on-site, and follow a written waste analysis plan describing procedures used to comply with the treatment standards. If waste is shipped off-site, generator also must comply with notification requirement of § 268.7(a)(2).
	E. Generator is managing a lab pack containing certain wastes and wishes to use an alternative treatment standard (see § 268.7(a)(8)).	Each shipment	Treatment facility	Notice in accordance with § 268.7(a)(1),(a)(5), and (a)(6), where applicable. Certification in accordance with § 268.7(a)(8).
	F. Small quantity generators with tolling agreements (pursuant to 40 CFR 262.20(e)) (see § 268.7(a)(9)).	Initial shipment	Treatment facility	Must comply with applicable notification and certification requirements in § 268.7(a). Generator also must retain copy of the notification and certification together with tolling agreement on-site for at least 3 years after termination or expiration of agreement.
	G. Generator has determined waste is restricted based solely on his knowledge of the waste (see § 268.7(a)(5)).	N/A	Generator's file	All supporting data must be retained on-site in generator's files.
	H. Generator has determined waste is restricted based on testing waste or an extract (see § 268.7(a)(5)).	N/A	Generator's file	All waste analysis data must be retained on-site in generator's files.

APPENDIX X TO PART 268--RECORDKEEPING, NOTIFICATION, AND/OR CERTIFICATION REQUIREMENTS

Entity	Scenario	Frequency	Recipient of notification	Recordkeeping, notification, and/or certification requirements.
	I. Generator has determined that waste is excluded from the definition of hazardous or solid waste or exempt from Subtitle C regulation (see § 268.7(a)(6)).	One-time	Generator's file	Notice of generation and subsequent exclusion from the definition of hazardous or solid waste, or exemption from Subtitle C regulation, and information regarding the disposition of the waste.
	J. Generator (or treater) claims that hazardous debris is excluded from the definition of hazardous waste under 40 CFR 261.3(f)(1) (see § 268.7(d)).	One-time	EPA Regional Administrator or authorized State. Notification must be updated as necessary under § 268.7(d)(2).	Notice must include: -Name and address of Subtitle D facility receiving treated debris -EPA hazardous waste number and description of debris as initially generated. -Technology used to treat the debris (Table 1 of § 268.45 Certification and recordkeeping in accordance with § 268.7(d)(3).
	K. Generator (or treater) claims that characteristic wastes are no longer hazardous (see § 268.9(d)).	One-time	Generator's (or treater's) files and EPA Regional Administrator or authorized State. Notification must be updated as necessary under § 268.9(d).	Notice must include: -Name and address of Subtitle D facility receiving the waste. -EPA hazardous waste number and description of waste as initially generated. -Treatability group. -Underlying hazardous constituents. Certification in accordance with § 268.9(d)(2).
	L. Other recordkeeping requirements (see § 268.7(a)(7)).	N/A	Generator's file	Generator must retain a copy of all notices, certifications, demonstrations, waste analysis data, and other documentation produced pursuant to § 268.7 on-site for at least 5 years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal. This period is automatically extended during enforcement actions or as requested by the Administrator.
II. Treatment Facility	A. Waste shipped from treatment facility to land disposal facility (see § 268.7(b)(4),(b)(5)).	Each shipment	Land disposal facility	Notice must include: -EPA hazardous waste number. -Constituents of concern. -Treatability group. -Manifest number. -Waste analysis data (where available). Applicable certification, in accordance with § 268.7(b)(5)(i),(ii) or (iii), stating that the waste or treatment residue has been treated in compliance with applicable treatment standards and prohibitions.
	B. Waste treatment residue from a treatment or storage facility will be further managed at a different treatment or storage facility (see § 268.7(b)(6)).	Each shipment	Receiving facility	Treatment, storage, or disposal facility must comply with all notice and certification requirements applicable to generators.

APPENDIX X TO PART 268--RECORDKEEPING, NOTIFICATION, AND/OR CERTIFICATION REQUIREMENTS

Entity	Scenario	Frequency	Recipient of notification	Recordkeeping, notification, and/or certification requirements.
	C. Where wastes are recyclable materials used in a manner constituting disposal subject to § 266.20(b) (see § 268.7(b)(7).	Each shipment	Regional Administrator (or delegated representative).	No notification to receiving facility required pursuant to § 268.7(b)(4). Certification as described in § 268.7(b)(5) and notice with information listed in § 268.7(b)(4), except manifest number. Recycling facility must keep records of the name and location of each entity receiving hazardous waste-derived products.
III. Land Disposal Facility	A. Wastes accepted by land disposal facility (see § 268.7(c)).	N/A	N/A	Maintain copies of notice and certifications specified in § 268.7(a) and (b).

Certification Statements

A. I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack does not contain any wastes identified at Appendix IV to part 268. I am aware that there are significant penalties for submitting a false certification including possibility of fine or imprisonment.

B. I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack does not contain any wastes identified at Appendix IV to part 268. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

C. I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the performance levels specified in 40 CFR part 268, subpart D, and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA section 3004(d) without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. (§ 268.7(b)(5)(i)).

D. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.42. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. (§ 268.7(b)(5)(ii)).

E. I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by incineration in units operated in accordance with 40 CFR part 264, subpart O or 40 CFR part 265, subpart O, or by combustion in fuel substitution units operating in accordance with applicable technical requirements, and I have been unable to detect the nonwastewater organic constituents, despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. (§ 268.7(b)(5)(iii)).

F. I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. (§ 268.7(b)(5)(iv)).

G. I certify under penalty of law that the debris have been treated in accordance with the requirements of 40 CFR 268.45. I am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment. (§ 268.7(d)(3)(iii)).

APPENDIX XI TO PART 268--METAL BEARING WASTES PROHIBITED FROM DILUTION IN A COMBUSTION UNIT ACCORDING TO 40 CFR 268.3(C)[1]

Waste code	Waste description
D004	Toxicity Characteristic for Arsenic
D005	Toxicity Characteristic for Barium
D006	Toxicity Characteristic for Cadmium
D007	Toxicity Characteristic for Chromium
D008	Toxicity Characteristic for Lead
D009	Toxicity Characteristic for Mercury
D010	Toxicity Characteristic for Selenium
D011	Toxicity Characteristic for Silver
F006	Wastewater treatment sludges from electroplating operations except from the following processes (1) sulfuric acid anodizing of aluminum. (2) tin plating carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.
F007	Spent cyanide plating bath solutions from electroplating operations
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.
F010	Quenching bath residues from oil baths from metal treating operations where cyanides are used in the process.
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.
F012	Quenching waste water treatment sludges from metal heat treating operations where cyanides are used in the process.
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum car washing when such phosphating is an exclusive conversion coating process.
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments
K003	Wastewater treatment sludge from the production of molybdate orange pigments.
K004	Wastewater treatment sludge from the production of zinc yellow pigments.
K005	Wastewater treatment sludge from the production of chrome green pigments.
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated)
K007	Wastewater treatment sludge from the production of iron blue pigments.
K008	Oven residue from the production of chrome oxide green pigments.
K061	Emission control dust/sludge from the primary production of steel in electric furnaces.
K069	Emission control dust/sludge from secondary lead smelting.
K071	Brine purification muds from the mercury cell processes in chlorine production, where separately prepurified brine is not used.
K100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.
K106	Sludges from the mercury cell processes for making chlorine
P010	Arsenic acid H_3AsO_4
P011	Arsenic oxide As_2O_5
P012	Arsenic trioxide
P013	Barium cyanide
P015	Beryllium
P029	Copper cyanide Cu(CN)
P074	Nickel cyanide $Ni(CN)_2$
P087	Osmium tetroxide
P099	Potassium silver cyanide
P104	Silver cyanide
P113	Thallic oxide
P114	Thallium (I) selenite
P115	Thallium (I) sulfate
P119	Ammonium vanadate
P120	Vanadium oxide V_2O_5
P121	Zinc cyanide
U032	Calcium chromate
U145	Lead phosphate
U151	Mercury
U204	Selenious acid
U205	Selenium disulfide
U216	Thallium (I) chloride

APPENDIX XI TO PART 268–METAL BEARING WASTES PROHIBITED FROM DILUTION IN A COMBUSTION UNIT ACCORDING TO 40 CFR 268.3(C)[1]—Continued

Waste code	Waste description
U217	Thallium (I) nitrate

[1] A combustion unit is defined as any thermal technology subject to 40 CFR part 264, subpart O, Part 265, subpart O, and/or 266, subpart H.

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. August 1, 1987;
Amended Eff. June 1, 1990;
June 1, 1989; June 1, 1988; February 1, 1988;
Transferred and Recodified from 10 NCAC 10F .0042 Eff. April 4, 1990;
Amended Eff. April 1, 1995; January 1, 1995; April 1, 1993; February 1, 1991;
October 1, 1990.

.0113 THE HAZARDOUS WASTE PERMIT PROGRAM - PART 270

(a) 40 CFR 270.1 through 270.6 (Subpart A), "General Information", have been incorporated by reference including subsequent amendments and editions. For the purpose of this incorporation by reference, "January 26, 1983" shall be substituted for "July 26, 1982" contained in 40 CFR 270.1(c).

SUBPART A – GENERAL INFORMATION

270.1 Purpose and scope of these regulations.

(a) *Coverage.*

(1) These permit regulations establish provisions for the Hazardous Waste Permit Program under Subtitle C of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended (RCRA), (Pub. L. 94-580, as amended by Pub. L. 95-609 and by Pub. L. 96-482; 42 U.S.C. 6091 et seq.). They apply to EPA and to approved States to the extent provided in Part 271.

(2) The regulations in this part cover basic EPA permitting requirements, such as application requirements, standard permit conditions, and monitoring and reporting requirements. These regulations are part of a regulatory scheme implementing RCRA set forth in different parts of the Code of Federal Regulations. The following chart indicates where the regulations implementing RCRA appear in the Code of Federal Regulations.

Section of RCRA	Coverage	Final regulation
Subtitle C.....	Overview and definitions	40 CFR Part 260
3001.....	Identification and listing of hazardous waste	40 CFR Part 261
3002.....	Generators of hazardous waste	40 CFR Part 262
3003.....	Transporters of hazardous waste	40 CFR Part 263
3004.....	Standards for HWM facilities	40 CFR Parts 264, 265, 266, and 267
3005.....	Permit requirements for HWM facilities	40 CFR Parts 270 and 124
3006.....	Guidelines for State programs	40 CFR Part 271
3010.....	Preliminary notification of HWM activity	(public notice) 45 FR 12746 Feb 26, 1980

(3) *Technical regulations.* The RCRA permit program has separate additional Regulations that contain technical requirements. These separate regulations are used by permit issuing authorities to determine what requirements must be placed in permits if they are issued. These separate regulations are located in 40 CFR Parts 264, 266, and 267.

(b) *Overview of the RCRA Permit Program.* Not later than 90 days after the promulgation or revision of regulations in 40 CFR Part 261 (identifying and listing hazardous wastes) generators and transporters of hazardous waste, and owners or operators of hazardous waste treatment, storage, or disposal facilities may be required to file a notification of that activity under Section 3010. Six months after the initial promulgation of the Part 261 regulations, treatment, storage, or disposal of hazardous waste by any person who has not applied for or received a RCRA permit is prohibited. A RCRA permit application consists of two parts, Part A (see Section 270.13) and

Part B (see Section 270.14 and applicable sections in Sections 270.15-270.29). For "existing HWM facilities," the requirement to submit an application is satisfied by submitting only Part A of the permit application until the date the Director sets for submitting Part B of the application. (Part A consists of Forms 1 and 3 of the Consolidated Permit Application Forms.) Timely submission of both notification under Section 3010 and Part A qualifies owners and operators of existing HWM facilities (who are required to have a permit) for interim status under section 3005(e) of RCRA. Facility owners and operators with interim status are treated as having been issued a permit until EPA or a State with interim authorization for Phase II or final authorization under Part 271 makes a final determination on the permit application. Facility owners and operators with interim status must comply with interim status standards set forth at 40 CFR Parts 265 and 266 or with the analogous provisions of a State program which has received interim or final authorization under Part 271. Facility owners and operators with interim status are not relieved from complying with other State requirements. For existing HWM facilities, the Director shall set a date, giving at least six months notice, for submission of Part B of the application. There is no form for Part B of the application; rather, Part B must be submitted in narrative form and contain the information set forth in the applicable sections of Sections 270.14 through 270.29. Owners or operators of new HWM facilities must submit Parts A and B of the permit application at least 180 days before physical construction is expected to commence.

(c) *Scope of the RCRA Permit Requirement.* RCRA requires a permit for the "treatment," "storage," and "disposal" of any "hazardous waste" as identified or listed in 40 CFR Part 261. The terms "treatment," "storage," "disposal," and "hazardous waste" are defined in Section 270.2. Owners and operators of hazardous waste management units must have permits during the active life (including the closure period) of the unit. Owners or operators of surface impoundments, landfills, land treatment units, and waste pile units that received wastes after July 26, 1982, or that certified closure (according to Section 265.115) after January 26, 1983, must have post-closure permits, unless they demonstrate closure by removal as provided under Section 270.1(c)(5) and (6). If a post-closure permit is required, the permit must address applicable Part 264 Groundwater Monitoring, Unsaturated Zone Monitoring, Corrective Action, and Post-closure Care Requirements of this chapter. The denial of a permit for the active life of a hazardous waste management facility or unit does not affect the requirement to obtain a post-closure permit under this section.

(1) *Specific inclusions.* Owners and operators of certain facilities require RCRA permits as well as permits under other programs for certain aspects of the facility operation. RCRA permits are required for:

(i) Injection wells that dispose of hazardous waste, and associated surface facilities that treat, store or dispose of hazardous waste, (See Section 270.64). However, the owners and operator with a UIC permit in a State with an approved or promulgated UIC program, will be deemed to have a RCRA permit for the injection well itself if they comply with the requirements of Section 270.60(b) (permit-by-rule for injection wells).

(ii) Treatment, storage, or disposal of hazardous waste at facilities requiring an NPDES permit. However, the owner and operator of a publicly owned treatment works receiving hazardous waste will be deemed to have an RCRA permit for that waste if they comply with the requirements of Section 270.60(c) (permit-by-rule for POTWs).

(iii) Barges or vessels that dispose of hazardous waste by ocean disposal and onshore hazardous waste treatment or storage facilities associated with an ocean disposal operation. However, the owner and operator will be deemed to have a RCRA permit for ocean disposal from the barge or vessel itself if they comply with the requirements of Section 270.60(a) (permit-by-rule for ocean disposal barges and vessels).

(2) *Specific exclusions.* The following persons are among those who are not required to obtain a RCRA permit:

(i) Generators who accumulate hazardous waste on-site for less than the time periods provided in 40 CFR 262.34.

(ii) Farmers who dispose of hazardous waste pesticides from their own use as provided in Section 262.70 of this chapter;

(iii) Persons who own or operator facilities solely for the treatment, storage or disposal of hazardous waste excluded from regulations under this part by 40 CFR 261.4 or 261.5 (small generator exemption).

(iv) Owners or operators of totally enclosed treatment facilities as defined in 40 CFR 260.10.

(v) Owners and operators of elementary neutralization units or wastewater treatment units as defined in 40 CFR 260.10.

(vi) Transporters storing manifested shipments of hazardous waste in containers meeting the requirements of 40 CFR 262.30 at a transfer facility for a period of ten days or less.

(vii) Persons adding absorbent material to waste in a container (as defined in Section 260.10 of his chapter) and persons adding waste to absorbent material in a container, provided that these actions

occur at the time waste is first placed in the container; and Sections 264.17(b), 264.171, and 264.172 of this chapter are complied with.

(viii) Universal waste handlers and universal waste transporters (as defined in 40 CFR 260.10) managing the wastes listed below. These handlers are subject to regulation under 40 part CFR 273.

(A) Batteries as described in 40 CFR 273.2;

(B) Pesticides as described in 40 CFR 273.3; and

(C) Thermostats as described in 40 CFR 273.4.

(3) *Further exclusions.*

(i) A person is not required to obtain an RCRA permit for treatment or containment activities taken during immediate response to any of the following situations:

(A) A discharge of a hazardous waste;

(B) An imminent and substantial threat of a discharge of hazardous waste;

(C) A discharge of a material which, when discharged, becomes a hazardous waste.

(D) An immediate threat to human health, public safety, property, or the environment from the known or suspected presence of military munitions, other explosive material, or an explosive device, as determined by an explosive or munitions emergency response specialist as defined in 40 CFR 260.10.

(ii) Any person who continues or initiates hazardous waste treatment or containment activities after the immediate response is over is subject to all applicable requirements of this part for those activities.

(iii) In the case of emergency responses involving military munitions, the responding military emergency response specialist's organizational unit must retain records for three years identifying the dates of the response, the responsible persons responding, the type and description of material addressed, and its disposition.

(4) *Permits for less than an entire facility.* EPA may issue or deny a permit for one or more units at a facility without simultaneously issuing or denying a permit to all of the units at the facility. The interim status of any unit for which a permit has not been issued or denied is not affected by the issuance or denial of a permit to any other unit at the facility.

(5) *Closure by removal.* Owners/operators of surface impoundments, land treatment units, and waste piles closing by removal or decontamination under Part 265 standards must obtain a post-closure permit unless they can demonstrate to the Regional Administrator that the closure met the standards for closure by removal or decontamination in Section 264.228, Section 264.280(e), or Section 264.258, respectively. The demonstration may be made in the following ways:

(i) If the owner/operator has submitted a Part B application for a post-closure permit, the owner/operator may request a determination, based on information contained in the application, that section 264 closure by removal standards were met. If the Regional Administrator believes that Section 264 standards were met, he/she will notify the public of this proposed decision, allow for public comment, and reach a final determination according to the procedures in paragraph (c)(6) of this section.

(ii) If the owner/operator has not submitted a Part B application for a post-closure permit, the owner/operator may petition the Regional Administrator for a determination that a post-closure permit is not required because the closure met the applicable Part 264 closure standards.

(A) The petition must include data demonstrating that closure by removal or decontamination standards were met, or it must demonstrate that the unit closed under State requirements that met or exceeded the applicable 264 closure-by-removal standard.

(B) The Regional Administrator shall approve or deny the petition according to the procedures outlined in paragraph (c)(6) of this section.

(6) *Procedures for closure equivalency determination.*

(i) If a facility owner/operator seeks an equivalency demonstration under Section 270.1(c)(5), the Regional Administrator will provide the public, through a newspaper notice, the opportunity to submit written comments on the information submitted by the owner/operator within 30 days from the date of the notice. The Regional Administrator will also, in response to a request or at his/her own discretion, hold a public hearing whenever such a hearing might clarify one or more issues concerning the equivalence of the Part 265 closure to a Part 264 closure. The Regional Administrator will give public notice of the hearing at least 30 days before it occurs. (Public notice of the hearing may be given at the same time as notice of the opportunity for the public to submit written comments, and the two notices may be combined.)

(ii) The Regional Administrator will determine whether the Part 265 closure met 264 closure by removal or decontamination requirements within 90 days of its receipt. If the Regional

Administrator finds that the closure did not meet the applicable Part 264 standards, he/she will provide the owner/operator with a written statement of the reasons why the closure failed to meet Part 264 standards. The owner/operator may submit additional information in support of an equivalency demonstration within 30 days after receiving such written statement. The Regional Administrator will review any additional information submitted and make a final determination within 60 days.

(iii) If the Regional Administrator determines that the facility did not close in accordance with Part 264 closure by removal standards, the facility is subject to post-closure permitting requirements.

270.2 Definitions.

The following definitions apply to Part 270, 271, and 124. Terms not defined in this section have the meaning given by RCRA. (See Rule .0002 for other definitions.)

Administrator means the Administrator of the United States Environmental Protection Agency, or an authorized representative.

Application means the EPA standard national forms for applying for a permit, including any additions, revisions or modifications to the forms; or forms approved by EPA for use in approved States, including any approved modifications or revisions. Application also includes the information required by the Director under Sections 270.14 through 270.29 (contents of Part B of the RCRA application).

Approved program or approved State means a State which has been approved or authorized by EPA under Part 271.

Aquifer means a geological formation, group of formations, or part of a formation that is capable of yielding a significant amount of water to a well or spring.

Closure means the act of securing a Hazardous Waste Management facility pursuant to the requirements of 40 CFR Part 264.

Component means any constituent part of a unit or any group of constituent parts of a unit which are assembled to perform a specific function (e.g., a pump seal, pump, kiln liner, kiln thermocouple).

Corrective Action Management Unit or *CAMU* means an area within a facility that is designated by the Regional Administrator under part 264 subpart S, for the purpose of implementing corrective action requirements under Section 264.101 and RCRA section 3008(h). A CAMU shall only be used for the management of remediation wastes pursuant to implementing such corrective action requirements at the facility.

CWA means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act amendments of 1972) Pub. L. 92-500, as amended by Pub. L. 92-217 and Publ. L. 95-576; 33 U.S.C. 1251 et seq.

Director means the Regional Administrator or the State Director, as the context requires, or an authorized representative. When there is no approved State program, and there is an EPA administered program, Director means the Regional Administrator. When there is an approved State program, Director normally means the State Director. In some circumstances, however, EPA retains the authority to take certain actions even when there is an approved State program. In such cases, the term Director means the Regional Administrator and not the State Director.

Disposal means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any hazardous waste into or on any land or water so that such hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground water.

Disposal facility means a facility or part of a facility at which hazardous waste is intentionally placed into or on the land or water, and at which hazardous waste will remain after closure. The term disposal facility does not include a corrective action management unit into which remediation wastes are placed.

Draft permit means a document prepared under Section 124.6 indicating the Director's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a permit. A notice of intent to terminate a permit, and a notice of intent to deny a permit, as discussed in Section 124.5, are types of draft permits. A denial of a request for modification, revocation and reissuance, or termination, as discussed in Section 124.5 is not a "draft permit." A proposed permit is not a draft permit.

Elementary neutralization unit means a device which:

(a) Is used for neutralizing wastes only because they exhibit the corrosivity characteristic defined in Section 261.22 of this chapter, or are listed in Subpart D of Part 261 of this chapter only for this reason; and

(b) Meets the definition of tank, tank system, container, transport vehicle, or vessel in Section 260.10 of this chapter.

Emergency permit means a RCRA permit issued in accordance with Section 270.61.

Environmental Protection Agency (EPA) means the United States Environmental Protection Agency.

EPA means the United States Environmental Protection Agency.

Existing hazardous waste management (HWM) facility or existing facility means a facility which was in operation or for which construction commenced on or before November 19, 1980. A facility has commenced construction if:

(a) The owner or operator has obtained the Federal, State and local approvals or permits necessary to begin physical construction; and either

(b) (1) A continuous on-site, physical construction program has begun; or

(2) The owner or operator has entered into contractual obligations which cannot be cancelled or modified without substantial loss for physical construction of the facility to be completed within a reasonable time.

Facility mailing list means the mailing list for a facility maintained by EPA in accordance with 40 CFR 124.10(c)(viii).

"Facility or activity" means any HWM facility or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the RCRA program.

Federal, State and local approvals or permits necessary to begin physical construction means permits and approvals required under Federal, State or local hazardous waste control statutes, regulations or ordinances.

Final authorization means approval by EPA of a State program which has met the requirements of section 3006(b) of RCRA and the applicable requirements of Part 271, Subpart A.

Functionally equivalent component means a component which performs the same function or measurement and which meets or exceeds the performance specifications of another component.

Generator means any person, by site location, whose act, or process produces "hazardous waste" identified or listed in 40 CFR Part 261.

Ground water means water below the land surface in a zone of saturation.

Hazardous waste means a hazardous waste as defined in 40 CFR 261.3.

.*Hazardous Waste Management facility*..(HWM facility) means all contiguous land, and 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 (for example, one or more landfills, surface impoundments, or combinations of them).

HWM facility means Hazardous Waste Management facility.

Injection well means a well into which fluids are being injected.

In operation means a facility which is treating, storing, or disposing of hazardous waste.

Interim authorization means approval by EPA of a State hazardous waste program which has met the requirements of section 3006(g)(2) of RCRA and applicable requirements of Part 271, Subpart B.

Major facility means any facility or activity classified as such by the Regional Administrator, or, in the case of approved State programs, the Regional Administrator in conjunction with the State Director.

Manifest means the shipping document originated and signed by the generator which contains the information required by Subpart B of 40 CFR Part 262.

National Pollutant Discharge Elimination System means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the CWA. The term includes an approved program.

NPDES means National Pollutant Discharge Elimination System.

New HWM facility means a Hazardous Waste Management facility which began operation or for which construction commenced after November 19, 1980.

Off-site means any site which is not on-site.

On-site means on the same or 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. Non-contiguous properties owned by the same person but connected by a right-of-way which the person controls and to which the public does not have access, is also considered on-site property.

Owner or operator means the owner or operator of any facility or activity subject to regulation under RCRA.

Permit means an authorization, license, or equivalent control document issued by EPA or an approved State to implement the requirements of this part and Parts 271 and 124. Permit includes permit by rule (Section 270.60), and emergency permit (Section 270.61). Permit does not include RCRA interim status (Subpart G of this part), or any permit which has not yet been the subject of final agency action, such as a draft permit or a proposed permit.

Permit-by-rule means a provision of these regulations stating that a facility or activity is deemed to have a RCRA permit if it meets the requirements of the provision.

Person means an individual, association, partnership, corporation, municipality, State or Federal agency, or an agent or employee thereof.

Physical construction means excavation, movement of earth, erection of forms or structures, or similar activity to prepare an HWM facility to accept hazardous waste.

POTW means publicly owned treatment works.

Publicly owned treatment works (POTW) means any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature which is owned by a State or municipality.

This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

RCRA means the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 (Pub. L. 94-580, as amended by Pub. L. 95-609 and Pub. L. 96-482, 42 U.S.C. 6901 et seq.)

Regional Administrator means the Regional Administrator of the appropriate Regional Office of the Environmental Protection Agency or the authorized representative of the Regional Administrator.

Schedule of compliance means a schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the Act and regulations.

SDWA means the Safe Drinking Water Act (Pub. L. 95-523, as amended by Pub. L. 95-1900; 42 U.S.C. 3001 et seq.).

Site means the land or water area where any facility or activity is physically located or conducted, including adjacent land used in connection with the facility or activity.

State means any of the 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, and the Commonwealth of the Northern Mariana Islands.

State Director means the chief administrative officer of any State agency operating an approved program, or the delegated representative of the State Director. If responsibility is divided among two or more State agencies, State Director means the chief administrative officer of the State agency authorized to perform the particular procedure or function to which reference is made.

State/EPA Agreement means an agreement between the Regional Administrator and the State which coordinates EPA and State activities, responsibilities and programs.

Storage means the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed, or stored elsewhere.

Transfer facility means 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.

Transporter means a person engaged in the off-site transportation of hazardous waste by air, rail, highway or water.

Treatment means 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 such wastes, or so as to recover energy or material resources from the waste, or so as to render such waste non-hazardous, or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.

UIC means the Underground Injection Control Program under Part C of the Safe Drinking Water Act, including an approved program.

Underground injection means a well injection.

Underground source of drinking water (USDW) means an aquifer or its portion:

(a) (1) Which supplies any public water system; or
(2) Which contains a sufficient quantity of ground water to supply a public water system; and
(i) Currently supplies drinking water for human consumption; or
(ii) Contains fewer than 10,000 mg/l total dissolved solids; and

(b) Which is not an exempted aquifer.

USDW means underground source of drinking water.

Wastewater treatment unit means a device which:

(a) Is part of a wastewater treatment facility which is subject to regulation under either section 402 or 307(b) of the Clean Water Act; and

(b) Receives and treats or stores an influent wastewater which is a hazardous waste as defined in Section 261.3 of this chapter, or generates and accumulates a wastewater treatment sludge which is a hazardous waste as defined in Section 261.3 of this chapter, or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in Section 261.3 of this chapter; and

(c) Meets the definition of tank or tank system in Section 260.10 of this chapter.

270.3 Consideration under Federal law.

The following is a list of Federal laws that may apply to the issuance of permits under these rules. When any of these laws is applicable, its procedures must be followed. When the applicable law requires consideration or adoption of particular permit conditions or requires the denial of a permit, those requirements also must be followed.

(a) *The Wild and Scenic Rivers Act.* 16 U.S.C. 1273 et seq. Section 7 of the Act prohibits the Regional Administrator from assisting by license or otherwise the construction of any water resources project that would have a direct, adverse effect on the values for which a national wild and scenic river was established.

(b) *The National Historic Preservation Act of 1966.* 16 U.S.C. 470 et seq. Section 106 of the Act and implementing regulations (36 CFR Part 800) require the Regional Administrator, before issuing a license, to adopt measures

when feasible to mitigate potential adverse effects of the licensed activity and properties listed or eligible for listing in the National Register of Historic Places. The Act's requirements are to be implemented in cooperation with State Historic Preservation Officers and upon notice to, and when appropriate, in consultation with the Advisory Council on Historic Preservation.

(c) *The Endangered Species Act.* 16 U.S.C. 1531 et seq. Section 7 of the Act and implementing regulations (50 CFR Part 402) require the Regional Administrator to ensure, in consultation with the Secretary of the Interior or Commerce, that any action authorized by EPA is not likely to jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat.

(d) *The Coastal Zone Management Act.* 16 U.S.C. 1451 et seq. Section 307(c) of the Act and implementing regulations (15 CFR Part 930) prohibit EPA from issuing a permit for an activity affecting land or water use in the coastal zone until the applicant certifies that the proposed activity complies with the State Coastal Zone Management program, and the State or its designated agency concurs with the certification (or the Secretary of Commerce overrides the State's nonconcurrence).

(e) *The Fish and Wildlife Coordination Act.* 16 U.S.C. 661 et seq. requires that the Regional Administrator, before issuing a permit proposing or authorizing the impoundment (with certain exemptions), diversion, or other control or modification of any body of water, consult with the appropriate State agency exercising jurisdiction over wildlife resources to conserve those resources.

(f) *Executive orders.* [Reserved]

270.4 Effect of a permit.

(a) Compliance with an RCRA permit during its term constitutes compliance, for purposes of enforcement, with Subtitle C of RCRA except for those requirements not included in the permit which:
  (1) Become effective by statute;
  (2) Are promulgated under Part 268 of this chapter restricting the placement of hazardous wastes in or on the land;
  (3) Are promulgated under part 264 of this chapter regarding leak detection systems for new and replacement surface impoundment, waste pile, and landfill units, and lateral expansions of surface impoundment, waste pile, and landfill units. The leak detection system requirements include double liners, CQA programs, monitoring, action leakage rates, and response action plans, and will be implemented through the procedures of Section 270.42 Class 1 permit modifications; or
  (4) Are promulgated under subparts AA, BB, or CC of part 265 of this chapter limiting air emissions.

(b) The issuance of a permit does not convey any property rights of any sort, or any exclusive privilege.

(c) The issuance of a permit does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations.

270.5 Noncompliance and program reporting by the Director.

The Director shall prepare quarterly and annual reports as detailed below. When the State is the permit-issuing authority, the State Director shall submit any reports required under this section to the Regional Administrator. When EPA is the permit-issuing authority, the Regional Administrator shall submit any report required under this section to EPA Headquarters. For purposes of this section only, RCRA permittees shall include RCRA interim status facilities, when appropriate.

(a) *Quarterly reports.* The Director shall submit quarterly narrative reports for major facilities as follows:
  (1) *Format.* The report shall use the following format:
    (i) Information on noncompliance for each facility;
    (ii) Alphabetize by permittee name. When two or more permittees have the same name, the lowest permit number shall be entered first;
    (iii) For each entry on the list, include the following information in the following order:
      (A) Name, location, and permit number of the noncomplying permittee.
      (B) A brief description and date of each instance of noncompliance for that permittee. Instances of noncompliance may include one or more of the kinds set forth in paragraph (a)(2) of this section. When a permittee has noncompliance of more than one kind, combine the information into a single entry for each such permittee.
      (C) The date(s) and a brief description of this action(s) taken by the Director to ensure compliance.

(D) Status of the instance(s) of noncompliance with the date of the review of the status or the date of resolution.

(E) Any details which tend to explain or mitigate the instance(s) of noncompliance.

(2) *Instances of noncompliance to be reported.* Any instances of noncompliance within the following categories shall be reported in successive reports until the noncompliance is reported as resolved. Once noncompliance is reported as resolved, it need not appear in subsequent reports.

(i) *Failure to complete construction elements.* When the permittee has failed to complete, by the date specified in the permit, an element of a compliance schedule involving either planning for construction (for example, award of a contract, preliminary plans), or a construction step (for example, begin construction, attain operation level); and the permittee has not returned to compliance by accomplishing the required element of the schedule within 30 days from the date a compliance schedule report is due under the permit.

(ii) *Modifications to schedules of compliance.* When a schedule of compliance in the permit has been modified under Sections 270.41 or 270.42 because of the permittee's noncompliance.

(iii) *Failure to complete or provide compliance schedule or monitoring reports.* When the permittee has failed to complete or provide a report required in a permit compliance schedule (for example, progress report or notice of noncompliance or compliance) or a monitoring report; and the permittee has not submitted the complete report within 30 days from the date it is due under the permit for compliance schedules, or from the date specified in the permit for monitoring reports.

(iv) *Deficient reports.* When the required reports provided by the permittee are so deficient as to cause misunderstanding by the Director and thus impede the review of the status of compliance.

(v) *Noncompliance with other permit requirements.* Noncompliance shall be reported in the following circumstances:

(A) Whenever the permittee has violated a permit requirement (other than reported under paragraph (a)(2)(i) or (ii) of this section), and has not returned to compliance within 45 days from the date reporting of noncompliance was due under the permit; or

(B) When the Director determines that a pattern of noncompliance exists for a major facility permittee over the most recent four consecutive reporting periods. This pattern includes any violation of the same requirement in two consecutive reporting periods, and any violation of one or more requirements in each of four consecutive reporting periods; or

(C) When the Director determines significant permit non-compliance or other significant event has occurred such as fire or explosion or migration of fluids into a USDW.

(vi) *All other.* Statistical information shall be reported quarterly on all other instances of noncompliance by major facilities with permit requirements not other-wise reported under paragraph (a) of this section.

(b) *Annual reports.*

(1) *Annual noncompliance report.* Statistical reports shall be submitted by the Director on nonmajor RCRA permittees indicating the total number reviewed, the number of noncomplying nonmajor permittees, the number of enforcement actions, and number of permit modifications extending compliance deadlines. The statistical information shall be organized to follow the types of noncompliance listed in paragraph (a) of this section.

(2) In addition to the annual noncompliance report, the Director shall prepare a "program report" which contains information (in a manner and form prescribed by the Administrator) on generators and transporters and the permit status of regulated facilities. The Director shall also include, on a biennial basis, summary information on the quantities and types of hazardous wastes generated, transported, treated, stored and disposed during the preceding odd-numbered year. This summary information shall be reported in a manner and form prescribed by the Administrator and shall be reported according to EPA characteristics and lists of hazardous wastes at 40 CFR Part 261.

(c) *Schedule.*

(1) *For all quarterly reports.* On the last working day of May, August, November, and February, the State Director shall submit to the Regional Administrator information concerning noncompliance with RCRA permit requirements by major facilities in the State in accordance with the following schedule. The Regional Administrator shall prepare and submit information for EPA-issued permits to EPA Headquarters in accordance with the same schedule.

QUARTERS COVERED BY REPORTS ON
NONCOMPLIANCE BY MAJOR DISCHARGES
[Date for completion of reports]

January, February, and March	[1]May 31
April 1, May, and June	[1]August 31
July, August and September	[1]November 30
October, November, and December	[1]February 28

[1]Reports must be made available to the public for inspection and copying on this date.

270.6 References.

(a) When used in Part 270 of this chapter, the following publications are incorporated by reference: (See 40 CFR 260.11 References).

(b) The references listed in paragraph (a) of this section are also available for inspection at the Office of the Federal Register, 1100 L Street, NW., Washington DC 20408. These incorporations by reference were approved by the Director of the Federal Register. These materials are incorporated as they exist on the date of approval and a notice of any change in these materials will be published in the FEDERAL REGISTER.

(b) 40 CFR 270.10 through 270.29 (Subpart B), "Permit Application", have been incorporated by reference including subsequent amendments and editions.

SUBPART B – PERMIT APPLICATION

270.10 General application requirements.

(a) *Permit application.* Any person who is required to have a permit (including new applicants and permittees with expiring permits) shall complete, sign, and submit an application to the Director as described in this section and Sections 270.70 through 270.73. Persons currently authorized with interim status shall apply for permits when required by the Director. Persons covered by RCRA permits by rule (Section 270.60), need not apply. Procedures for applications, issuance and administration of emergency permits are found exclusively in section 270.61. Procedures for application, issuance and administration of research, development, and demonstration permits are found exclusively in section 270.65.

(b) *Who applies?* When a facility or activity is owned by one person but is operated by another person, it is the operator's duty to obtain a permit, except that the owner must also sign the permit application.

(c) *Completeness.* The Director shall not issue a permit before receiving a complete application for a permit except for permits by rule, or emergency permits. An application for a permit is complete when the Director receives an application form and any supplemental information which is completed to his satisfaction. An application for a permit is complete notwithstanding the failure of the owner or operator to submit the exposure information described in paragraph (j) of this section. The Director may deny a permit for the active life of a hazardous waste management facility or unit before receiving a complete application for a permit.

(d) *Information requirements.* All applicants for RCRA permits shall provide information set forth in Section 270.13 and applicable sections in Sections 270.14 through 270.29 to the Director, using the application form provided by the Director.

(e) *Existing HWM facilities and interim status qualifications.*

(1) Owners and operators of existing hazardous waste management facilities or of hazardous waste management facilities in existence on the effective date of statutory or regulatory amendments under the act that render the facility subject to the requirement to have a RCRA permit must submit Part A of their permit application no later than:

(i) Six months after the date of publication of regulations which first require them to comply with the standards set forth in 40 CFR Parts 265 or 266, or

(ii) Thirty days after the date they first become subject to the standards set forth in 40 CFR Part 265 or 266, whichever first occurs.

(iii) For generators generating greater than 100 kilograms but less than 1000 kilograms of hazardous waste in a calendar month and treats, stores, or disposes of these wastes on-site, by March 24, 1987.

[**Note:** For facilities which must comply with Part 265 because they handle a waste listed in EPA's May 19, 1980, Part 261 regulations (45 FR 33006 et seq.), the deadline for submitting an application is November 19, 1980. Where other existing facilities must begin in complying with Parts 265 or 266 at a later date because of revisions to Parts 260, 261, 265, or 266, the Administrator will specify in the preamble to those revisions when those facilities must submit a permit application.]

(2) The Administrator may by publication in the FEDERAL REGISTER extend the date by which owners and operators of specified classes of existing hazardous waste management facilities must submit Part A of their permit application if he finds that:

(i) there has been substantial confusion as to whether the owners and operators of such facilities were required to file a permit application and

(ii) such confusion is attributed to ambiguities in EPA's Parts 260, 261,265, or 266 regulations.

(3) The administrator may by compliance order issued under Section 3008 of RCRA extend the date by which the owner and operator of an existing hazardous waste management facility must submit Part A of their permit application.

(4) The owner or operator of an existing hazardous waste management facility may be required to submit part B of their permit application. The State Director may require submission of part B (or equivalent completion of the State RCRA application process) if the State in which the facility is located has received

interim or final authorization; if not, the regional Administrator may require submission of Part B. Any owner or operator shall be allowed at least six months from the date of request to submit part B of the application. Any owner or operator of an existing hazardous waste management facility may voluntarily submit part B of the application at any time.

Notwithstanding the above, any owner or operator of an existing hazardous waste management facility must submit a part B permit application in accordance with the dates specified in Section 270.73. Any owner or operator of a land disposal facility in existence on the effective date of statutory or regulatory amendments under this Act that render the facility subject to the requirement to have a RCRA permit must submit a part B application in accordance with the dates specified in Section 270.73.

(5) Failure to furnish a requested part B application on time, or to furnish in full the information required by the Part B application, is grounds for termination of interim status under Part 124.

(f) *New HWM facilities.*

(1) Except as provided in paragraph (f)(3) of this section, no person shall begin physical construction of a new HWM facility without having submitted Parts A and Part B of the permit application and having received a finally effective RCRA permit.

(2) An application for a permit for a new hazardous waste management facility (including both Parts A and Part B) may be filed any time after promulgation of those standards in Part 264, Subpart I *et seq.* applicable to such facility. The application shall be filed with the Regional Administrator if at the time of application the State in which the new hazardous waste management facility is proposed to be located has not received or final authorization for permitting such facility; otherwise it shall be filed with the State Director. Except as provided in paragraph (f)(3) of this section, all applications must be submitted at least 180 days before physical construction is expected to commence.

(3) Notwithstanding paragraph (f)(1) of this section, a person may construct a facility for the incineration of polychlorinated biphenyls pursuant to an approval issued by the Administrator under Section (6)(e) of the Toxic Substances Control Act and any person owning or operating such a facility may, at any time after construction or operation of such facility has begun, file an application for a RCRA permit to incinerate hazardous waste authorizing such facility to incinerate waste identified or listed under Subtitle C of RCRA.

(g) *Updating permit applications.*

(1) If any owner or operator of a hazardous waste management facility has filed Part A of a permit application and has not yet filed Part B, the owner or operator shall file an amended Part A application:

(i) With the Regional Administrator if the facility is located in a State which has not obtained interim authorization or final authorization, within six months after the promulgation of revised regulations under Part 261 listing or identifying additional hazardous wastes, if the facility is treating, storing, or disposing of any of those newly listed or identified wastes.

(ii) With the State Director, if the facility is located in a State which has obtained interim authorization or final authorization, no later than the effective date of regulatory provisions listing or designating wastes as hazardous in that State in addition to those listed or designated under the previously approved State program, if the facility is treating, storing, or disposing of any of those newly listed or designated wastes; or

(iii) As necessary to comply with provisions of Section 270.72 for changes during interim status or with the analogous provisions of a State program approved for final authorization or interim authorization. Revised Part A applications necessary to comply with the provisions of Section 270.72 shall be filed with the Regional Administrator if the State in which the facility in question is located does not have interim authorization or final authorization; otherwise it shall be be filed with the State Director (if the State has an analogous provision).

(2) The owner or operator of a facility who fails to comply with the updating requirements of paragraph (g)(1) of this section does not receive interim status as to the wastes not covered by duly filed Part A applications.

(h) *Reapplications.* Any HWM facility with an effective permit shall submit a new application at least 180 days before the expiration date of the effective permit, unless permission for a later date has been granted by the Director. (The Director shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

(i) *Recordkeeping.* Applicants shall keep records of all data used to complete permit applications and any supplemental information submitted under Section 270.10(d) 270.13, 270.14 through 270.21 for a period of at least 3 years from the date the application is signed.

(j) *Exposure information.*

(1) After August 8, 1985 any Part B permit application submitted by an owner or operator of a facility that stores, treats, or disposes of hazardous waste in a surface impoundment or a landfill must be accompanied by information, reasonably ascertainable by the owner or operator, on the potential for the public to be exposed to hazardous wastes or hazardous constituents through release related to the unit. At a minimum, such information must address:

(i) Reasonably foreseeable potential releases from both normal operations and accidents at the unit, including releases associated with transportation to or from the unit;

(ii) The potential pathways of human exposure to hazardous wastes or constituents resulting from the releases described under paragraph (i); and

(iii) The potential magnitude and nature of the human exposure resulting from such releases.

(2) By August 8, 1985, owners and operators of a landfill or a surface impoundment who have already submitted a Part B application must submit the exposure information required in paragraph (j)(1) of this section.

(k) The Director may require a permittee or an applicant to submit information in order to establish permit conditions under Sections 270.32(b)(2) and 270.50(d) of this chapter.

270.11 Signatories to permit applications and reports.

(a) *Applications.* All permit applications shall be signed as follows:

(1) *For a corporation*: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

(i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decisionmaking functions for the corporation, or

(ii) the manager of one or more manufacturing, production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second-quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

[**Note:** EPA does not require specific assignments or delegations of authority to responsible corporate officers identified in Section 270.11(a)(1)(i). The Agency will presume that these responsible corporate officers have the requisite authority to sign permit applications unless the corporation has notified the Director to the contrary. Corporate procedures governing authority to sign permit applications may provide for assignment or delegation to applicable corporate positions under Section 270.11(a)(1)(ii) rather than to specific individuals.]

(2) *For a partnership or sole proprietorship*; by a general partner or the proprietor, respectively; or

(3) *For a municipality, State, Federal, or other public agency:* by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

(i) The chief executive officer of the agency, or

(ii) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).

(b) *Reports.* All reports required by permits and other information requested by the Director shall be signed by a person described in paragraph (a) of this section, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(1) The authorization is made in writing by a person described in paragraph (a) of this section;

(2) The authorization specifies either an individual or a position having responsibility for overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position); and

(3) The written authorization is submitted to the Director.

(c) *Changes to authorization.* If an authorization under paragraph (b) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (b) of this section must be submitted to the Director prior to or together with any reports, information, or applications to be signed by an authorized representative.

(d) *Certification.* Any person signing a document under paragraphs (a) or (b) of this section shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

270.12 Confidentiality of information.

(a) In accordance with 40 CFR Part 2, any information submitted to EPA pursuant to these regulations may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the information will be treated in accordance with the procedures in 40 CFR Part 2 (Public Information).
(b) Claims of confidentiality for the name and address of any permit applicant or permittee will be denied.

270.13 Contents of Part A of the permit application.

Part A of the RCRA application shall include the following information:
(a) The activities conducted by the applicant which require it to obtain a permit under RCRA.
(b) Name, mailing address, and location, including latitude and longitude of the facility for which the application is submitted.
(c) Up to four SIC codes which best reflect the principal products or services provided by the facility.
(d) The operator's name, address, telephone number, ownership status, and status as Federal, State, private, public, or other entity.
(e) The name, address, and phone number of the owner of the facility.
(f) Whether the facility is located on Indian lands.
(g) An indication of whether the facility is new or existing and whether it is a first or revised application.
(h) For existing facilities,
    (1) a scale drawing of the facility showing the location of all past, present, and future treatment, storage, and disposal areas; and
    (2) photographs of the facility clearly delineating all existing structures; existing treatment, storage, and disposal areas; and sites of future treatment, storage, and disposal areas.
(i) A description of the processes to be used for treating, storing, and disposing of hazardous waste, and the design capacity of these items.
(j) A specification of the hazardous wastes listed or designated under 40 CFR Part 261 to be treated, stored, or disposed of at the facility, an estimate of the quantity of such wastes to be treated, stored, or disposed annually, and a general description of the processes to be used for such wastes.
(k) A listing of all permits or construction approvals received or applied for under any of the following programs:
    (1) Hazardous Waste Management program under RCRA.
    (2) UIC program under the SWDA.
    (3) NPDES program under the CWA.
    (4) Prevention of Significant Deterioration (PSD) program under the Clean Air Act.
    (5) Nonattainment program under the Clean Air Act.
    (6) National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under the Clear Air Act.
    (7) Ocean dumping permits under the Marine Protection Research and Sanctuaries Act.
    (8) Dredge or fill permits under section 404 of the CWA.
    (9) Other relevant environmental permits, including State permits.
(l) A topographic map (or other map if a topographic map is unavailable) extending one mile beyond the property boundaries of the source, depicting the facility and each of its intake and discharge structures; each of its hazardous waste treatment, storage, or disposal facilities; each well where fluids from the facility are injected underground; and those wells, springs, other surface water bodies, and drinking water wells listed in public records or otherwise known to the applicant within 1/4 mile of the facility property boundary.
(m) A brief description of the nature of the business.

(n) For hazardous debris, a description of the debris category(ies) and contaminant category(ies) to be treated, stored, or disposed of at the facility.

270.14 Contents of Part B: General Requirements.

(a) Part B of the permit application consists of the general information requirements of this section, and the specific information requirements in Sections 270.14 through 270.29 applicable to the facility. The Part B information requirements presented in Sections 270.14 through 270.29 reflect the standards promulgated in 40 CFR Part 264. These information requirements are necessary in order for EPA to determine compliance with the Part 264 standards. If owners and operators of HWM facilities can demonstrate that the information prescribed in Part B can not be provided to the extent required, the Director may make allowance for submission of such information on a case-by-case basis. Information required in Part B shall be submitted to the Director and signed in accordance with requirements in Section 270.11. Certain technical data, such as design drawings and specifications, and engineering studies shall be certified by a registered professional engineer.

(b) General information requirements. The following information is required for all HWM facilities, except as Section 264.1 provides otherwise:

(1) A general description of the facility.

(2) Chemical and physical analyses of the hazardous waste and hazardous debris to be handled at the facility. At a minimum, these analyses shall contain all the information which must be known to treat, store, or dispose of the wastes properly in accordance with Part 264 of this chapter.

(3) A copy of the waste analysis plan required by Section 264.13(b) and, if applicable Section 264.13(c).

(4) A description of the security procedures and equipment required by Section 264.14, or a justification demonstrating the reasons for requesting a waiver of this requirement.

(5) A copy of the general inspection schedule required by 264.15(b). Include where applicable, as part of the inspection schedule, specific requirements in Sections 264.174, 245.193(i), 264.193(i), 264.195, 264.226, 264.254, 264.273, 264.303, 264.602, 264.1033, 264.1052, 264.1053, 264.1058, 264.1084, 264.1085, 264.1086, and 264.1088.

(6) A justification of any request for a waiver(s) of the preparedness and prevention requirements of Part 264, Subpart C.

(7) A copy of the contingency plan required by Part 264, Subpart D. Note: Include, where applicable, as part of the contingency plan, specific requirements in Sections 264.227, 264.255, and 264.200.

(8) A description of procedures, structures, or equipment used at the facility to:

(i) Prevent hazards in unloading operations (for example, ramps, special forklifts);

(ii) Prevent runoff from hazardous waste handling areas to other areas of the facility or environment, or to prevent flooding (for example, berms, dikes, trenches);

(iii) Prevent contamination of water supplies;

(iv) Mitigate effects of equipment failure and power outages;

(v) Prevent undue exposure of personnel to hazardous waste (for example, protective clothing); and

(vi) Prevent releases to atmosphere.

(9) A description of precautions to prevent accidental ignition or reaction of ignitable, reactive, or incompatible wastes as required to demonstrate compliance with Section 264.17 including documentation demonstrating compliance with Section 264.17(c).

(10) Traffic pattern, estimated volume (number, types of vehicles) and control (for example, show turns across traffic lanes, and stacking lanes (if appropriate); describe access road surfacing and load bearing capacity; show traffic control signals).

(11) Facility location information:

(i) In order to determine the applicability of the seismic standard [Section 264.18(a)] the owner or operator of a new facility must identify the political jurisdiction (e.g., county, township, or election district) in which the facility is proposed to be located.

[Comment: If the county or election district is not listed in Appendix VI of Part 264, no further information is required to demonstrate compliance with Section 264.18(a).]

(ii) If the facility is proposed to be located in an area listed in Appendix VI of Part 264, the owner or operator shall demonstrate compliance with the seismic standard. This demonstration may be made using either published geologic data or data obtained from field investigations carried out by the applicant. The information provided must be of such quality to be acceptable to geologists

experienced in identifying and evaluating seismic activity. The information submitted must show that either:

(A) No faults which have had displacement in Holocene time are present, or no lineations which suggest the presence of a fault (which have displacement in Holocene time) within 3,000 feet of a facility are present, based on data from:
  (1) Published geologic studies;
  (2) Aerial reconnaissance of the area within a five-mile radius from the facility.
  (3) An analysis of aerial photographs covering a 3,000 foot radius of the facility, and
  (4) If needed to clarify the above data, a reconnaissance based on walking portions of the area within 3,000 feet of the facility, or

(B) If faults (to include lineations) which have had displacement in Holocene time are present within 3,000 feet of a facility, no faults pass with 200 feet of the portions of the facility where treatment, storage, or disposal of hazardous waste will be conducted, based on data from a comprehensive geologic analysis of the site. Unless a site analysis is otherwise conclusive concerning the absence of faults within 200 feet of such portions of the facility data shall be obtained from subsurface exploration (trenching) of the area within a distance no less than 200 feet from portions of the facility where treatment, storage, or disposal of hazardous waste will be conducted. Such trenching shall be performed in a direction that is perpendicular to known faults (which have had displacement in Holocene time) passing within 3,000 feet of the portions of the facility where treatment, storage or disposal of hazardous waste will be conducted. Such investigation shall document with supporting maps and other analyses, the location of faults found.

[**Comment:** The Guidance Manual for the Location Standards provides greater detail on the content of each type of seismic investigation and the appropriate conditions under which each approach or a combination of approaches would be used.]

(iii) Owners and operators of all facilities shall provide an identification of whether the facility is located within a 100-year floodplain. This identification must indicate the source of data for such determination and include a copy of the relevant Federal Insurance Administration (FIA) flood map, is used, or the calculations and maps used where an FIA map is not available. Information shall also be provided identifying the 100-year flood level and any other special flooding factors (e.g., wave action) which must be considered in designing, constructing, operating, or maintaining the facility to withstand washout from a 100-year flood.

[**Comment:** Where maps for the National Flood Insurance Program produced by the Federal Insurance Administration (FIA) of the Federal Emergency Management Agency are available, they will normally be determinative of whether a facility is located within or outside of the 100-year flood plain. However, where the FIA map excludes an area (usually areas of the floodplain less than 200 feet in width), these areas must be considered and a determination made as to whether they are in the 100-year floodplain. Where FIA maps are not available for a proposed facility location, the owner or operator must use equivalent mapping techniques to determine whether the facility is within the 100-year floodplain, and, if so located, what the 100-year flood elevation would be.]

(iv) Owners and operators of facilities located in the 100-year floodplain must provide the following information:

(A) Engineering analysis to indicate the various hydrodynamic and hydrostatic forces expected to result at the site as consequence of a 100-year flood.

(B) Structural or other engineering studies showing the design of operational units (e.g., tanks, incinerators) and flood protection devices (e.g., floodwalls, dikes) at the facility and how these will prevent washout.

(C) If applicable, and in lieu of paragraphs (b)(11)(iv)(A) and (B) of this section, a detailed description of procedures to be followed to remove hazardous waste to safety before the facility is flooded, including:
  (1) Timing of such movement relative to flood levels, including estimated time to move the waste, to show that such movement can be completed before floodwaters reach the facility.
  (2) A description of the location(s) to which the waste will be moved and demonstration that those facilities will be eligible to receive hazardous waste in accordance with the regulations under Parts 270, 271, 124, and 264 through 266 of this chapter.

(3) The planned procedures, equipment, and personnel to be used and the means to ensure that such resources will be available in time for use.
(4) The potential for accidental discharges of the waste during movement.

(v) Existing facilities NOT in compliance with Section 264.18(b) shall provide a plan showing how the facility will be brought into compliance and a schedule for compliance.

(12) An outline of both the introductory and continuing training programs by owners or operators to prepare persons to operate or maintain the HWM facility in a safe manner as required to demonstrate compliance with Section 264.16. A brief description of how training will be designed to meet actual job tasks in accordance with requirements in Section 264.16(a)(3).

(13) A copy of the closure plan and, where applicable, the post-closure plan required by Sections 264.112, 264.118 and 264.197. Include, where applicable, as part of the plans, specific requirements in Sections 264.178, 264.197, 264.228, 264.258, 264.280, 264.310, 264.351, 264.601, and 264.603.

(14) For hazardous waste disposal units that have been closed, documentation that notices required under Section 264.119 have been filed.

(15) The most recent closure cost estimate for the facility prepared in accordance with Section 264.142 and a copy of the documentation required to demonstrate financial assurance under Section 264.143. For a new facility, a copy of the required documentation may be submitted 60 days prior to the initial receipt of hazardous wastes, if that is later than the submission of the Part B.

(16) Where applicable, the most recent post closure cost estimate for the facility prepared in accordance with Section 264.144 plus a copy of the documentation required to demonstrate financial assurance under Section 264.145. For a new facility, a copy of the required documentation may be submitted 60 days prior to the initial receipt of hazardous wastes, if that is later than the submission of the Part B.

(17) Where applicable, a copy of the insurance policy or other documentation which comprises compliance with the requirements of Section 264.147. For a new facility, documentation showing the amount of insurance meeting the specification of Section 264.147(a) and, if applicable, Section 264.147(b), that the owner or operator plans to have in effect before initial receipt of hazardous waste for treatment, storage, or disposal1. A request for a variance in the amount of required coverage, for a new or existing facility, may be submitted as specified in Section 264.147(c).

(18) Where appropriate, proof of coverage by a State financial mechanism in compliance with Sections 264.149 or 264.150.

(19) A topographic map showing a distance of 1000 feet around the facility at a scale of 2.5 centimeters (1 inch) equal to not more than 61.0 meters (200 feet). Contours must be shown on the map. The contour interval must be sufficient to clearly show the pattern of surface water flow in the vicinity of and from each operational unit of the facility. For example, contours with an interval of 1.5 meters (5 feet), if relief is greater than 6.1 meters (20 feet), or an interval of 0.6 meters (2 feet), if relief is less than 6.1 meters (20 feet). Owners and operators of HWM facilities located in mountainous areas should use large contour intervals to adequately show topographic profiles of facilities. The map shall clearly show the following:

(i) Map scale and date.
(ii) 100-year floodplain area.
(iii) Surface waters including intermittant streams.
(iv) Surrounding land uses (residential, commercial, agricultural, recreational).
(v) A wind rose (i.e., prevailing wind-speed and direction).
(vi) Orientation of the map (north arrow).
(vii) Legal boundaries of the HWM facility site.
(viii) Access control (fences, gates).
(ix) Injection and withdrawal wells both on-site and off-site.
(x) Buildings; treatment, storage, or disposal operations; or other structure (recreation areas, runoff control systems, access and internal roads, storm, sanitary, and process sewerage systems, loading and unloading areas, fire control facilities, etc.)
(xi) Barriers for drainage or flood control.
(xii) Location of operational units within the HWM facility site, where hazardous waste is (or will be) treated, stored, or disposed (include equipment cleanup areas).

Note: For large HWM facilities the Agency will allow the use of other scales on a case-by-case basis.

(20) Applicants may be required to submit such information as may be necessary to enable the Regional Administrator to carry out his duties under other Federal laws as required in Section 270.3 of this part.

(21) For land disposal facilities, if a case-by-case extension has been approved under Section 268.5 or a petition has been approved under Section 268.6, a copy of the notice of approval for the extension or petition is required.

(c) *Additional information requirements.* The following additional information regarding protection of ground water is required from owners or operators of hazardous waste facilities containing a regulated unit except as provided in Section 264.90(b) of this chapter:

(1) A summary of the ground-water monitoring data obtained during the interim status period under Sections 265.90 through 265.94, where applicable.

(2) Identification of the uppermost aquifer and aquifers hydraulically interconnected beneath the facility property, including ground water flow direction and rate, and the basis for such identification (i.e., the information obtained from hydrogeologic investigations of the facility area).

(3) On the topographic map required under paragraph (b)(19) of this section, a delineation of the waste management area, the property boundary, the proposed "point of compliance" as defined under Section 264.95, the proposed location of ground-water monitoring wells as required under Section 264.97, and, to the extent possible, the information required in paragraph (c)(2) of this section.

(4) A description of any plume of contamination that has entered the ground water from a regulated unit at the time that the application was submitted that:

(i) Delineates the extent of the plume on the topographic map required under paragraph (b)(19) of this section;

(ii) Identifies the concentration of each Appendix IX, of Part 264 of this chapter, constituent throughout the plume or identifies the maximum concentrations of each Appendix IX constituent in the plume.

(5) Detailed plans and an engineering report describing the proposed ground water monitoring program to be implemented to meet the requirements of Section 264.97.

(6) If the presence of hazardous constituents has <u>not</u> been detected in the ground water at the time of permit application, the owner or operator must submit sufficient information, supporting data, and analyses to establish a detection monitoring program which meets the requirements of Section 264.98. This submission must address the following items specified under Section 264.98:

(i) A proposed list of indicator parameters, waste constituents, or reaction products that can provide a reliable indication of the presence of hazardous constituents in the ground-water;

(ii) A proposed ground water monitoring system;

(iii) Background values for each proposed monitoring parameter or constituent, or procedures to calculate such values; and

(iv) A description of proposed sampling, analysis and statistical comparison procedures to be utilized in evaluating ground-water monitoring data.

(7) If the presence of hazardous constituents has been detected in the ground water at the point of compliance at the time of permit application, the owner or operator must submit sufficient information, supporting data, and analyses to establish a compliance monitoring program which meets the requirements of Section 264.99. Except as provided in Section 264.98(h)(5), the owner or operator must also submit an engineering feasibility plan for a corrective action program necessary to meet the requirements of Section 264.100, unless the owner or operator obtains written authorization in advance from the Regional Administrator to submit a proposed permit schedule for submittal of such a plan. To demonstrate compliance with Section 264.99, the owner or operator must address the following items:

(i) A description of the wastes previously handled at the facility;

(ii) A characterization of the contaminated ground water, including concentrations of hazardous constituents;

(iii) A list of hazardous constituents for which compliance monitoring will be undertaken in accordance with Sections 264.97 and 264.99;

(iv) Proposed concentration limits for each hazardous constituent, based on the criteria set forth in Section 264.94(a), including a justification for establishing any alternate concentration limits;

(v) Detailed plans and an engineering report describing the proposed ground-water monitoring system, in accordance with the requirements of Section 264.97; and

(vi) A description of proposed sampling, analysis and statistical comparison procedures to be utilized in evaluating ground-water monitoring data.

(8) If hazardous constituents have been measured in the ground water which exceed the concentration limits established under Section 264.94 Table 1, or if ground water monitoring conducted at the time of permit application under Sections 265.90 through 265.94 at the waste boundary indicates the presence of hazardous constituents from the facility in ground water over background concentrations, the owner or operator must submit sufficient information, supporting data, and analyses to establish a corrective action

program which meets the requirements of Section 264.100. However, an owner or operator is not required to submit information to establish a corrective action program if he demonstrates to the Regional Administrator that alternate concentration limits will protect human health and the environment after considering the criteria listed in Section 264.94(b). An owner or operator who is not required to establish a corrective action program for this reason must instead submit sufficient information to establish a compliance monitoring program which meets the requirements of Section 264.99 and paragraph (c)(6) of this section. To demonstrate compliance with Section 264.100, the owner or operator must address, at a minimum, the following items:

(i) A characterization of the contaminated ground water, including concentrations of hazardous constituents;

(ii) The concentration limit for each hazardous constituent found in the ground water as set forth in Section 264.94;

(iii) Detailed plans and an engineering report describing the corrective action to be taken; and

(iv) A description of how the ground-water monitoring program will demonstrate the adequacy of the corrective action.

(v) The permit may contain a schedule for submittal of the information required in paragraphs (c)(8)(iii) and (iv) provided the owner or operator obtains written authorization from the Regional Administrator prior to submittal of the complete permit application.

(d) *Information requirements for solid waste management units.*

(1) The following information is required for each solid waste management unit at a facility seeking a permit:

(i) The location of the unit on the topographic map required under paragraph (b)(19 of this section.

(ii) Designation of type of unit.

(iii) General dimensions and structural description (supply any available drawings).

(iv) When the unit was operated.

(v) Specification of all wastes that have been managed at the unit, to the extent available.

(2) The owner or operator of any facility containing one or more solid waste management units must submit all available information pertaining to any release of hazardous wastes or hazardous constituents from such unit or units.

(3) The owner/operator must conduct and provide the results of sampling and analysis of groundwater, landsurface, and subsurface strata, surface water, or air, which may include the installation of wells, where the Director ascertains it is necessary to complete a RCRA Facility Assessment that will determine if a more complete investigation is necessary.

270.15 Specific Part B information requirements for containers.

Except as otherwise provided in Section 264.170, owners or operators of facilities that store containers of hazardous waste must provide the following additional information:

(a) A description of the containment system to demonstrate compliance with Section 264.175. Show at least the following:

(1) Basic design parameters, dimensions, and materials of construction.

(2) How the design promotes drainage or how containers are kept from contact with standing liquids in the containment system.

(3) Capacity of the containment system relative to the number and volume of containers to be stored.

(4) Provisions for preventing or managing run-on.

(5) How accumulated liquids can be analyzed and removed to prevent overflow.

(b) For storage areas that store containers holding wastes that do not contain free liquids, a demonstration of compliance with Section 264.175(c), including:

(1) Test procedures and results or other documentation or information to show that the wastes do not contain free liquids; and

(2) A description of how the storage area is designed or operated to drain and remove liquids or how containers are kept from contact with standing liquids.

(c) Sketches, drawings, or data demonstrating compliance with Section 264.176 (location of buffer zone and containers holding ignitable or reactive wastes) and Section 264.177(c) (location of incompatible wastes), where applicable.

(d) Where incompatible wastes are stored or otherwise managed in containers, a description of the procedures used to ensure compliance with Section 264.177 (a) and (b), and 264.17 (b) and (c).

(e) Information on air emission control equipment as required in Section 270.27.

270.16 Specific Part B information requirements for tank systems.

Except as otherwise provided in 264.190, owners and operators of facilities that use tanks to store or treat hazardous waste must provide the following additional information:

(a) A written assessment that is reviewed and certified by an independent, qualified, registered professional engineer as to the structural integrity and suitability for handling hazardous waste of each tank system, as required under 264.191 and 264.192;

(b) Dimensions and capacity of each tank:

(c) Description of feed systems, safety cutoff, bypass systems, and pressure controls (e.g., vents):

(d) A diagram of piping, instrumentation, and process flow for each tank system;

(e) A description of materials and equipment used to provide external corrosion protection, as required under 264.192(a)(3)(ii);

(f) For new tank systems, a detailed description of how the tank system(s) will be installed in compliance with 264.192 (b), (c), (d), and (e);

(g) Detailed plans and description of how the secondary containment system for each tank system is or will be designed, constructed, and operated to meet the requirements of 264.193 (a), (b), (c), (d), (e), and (f);

(h) For tank systems for which a variance from the requirements of 264.193 is sought (as provided by 264.193(g)):

(1) Detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous waste or hazardous constituents into the ground water or surface water during the life of the facility, or

(2) A detailed assessment of the substantial present or potential hazards posed to human health or the environment should a release enter the environment.

(i) Description of controls and practices to prevent spills and overflows, as required under 264.194(b); and

(j) For tank systems in which ignitable, reactive, or incompatible wastes are to be stored or treated, a description of how operating procedures and tank system and facility design will achieve compliance with the requirements of Sections 264.198 and 264.199.

(k) Information on air emission control equipment as required in Section 270.27.

270.17 Specific Part B Information Requirements for Surface Impoundments.

Except as otherwise provided in Section 264.1, owners and operators of facilities that store, treat or dispose of hazardous waste in surface impoundments must provide the following additional information:

(a) A list of the hazardous wastes placed or to be placed in each surface impoundment;

(b) Detailed plans and an engineering report describing how the surface impoundment is designed and is or will be constructed, operated, and maintained to meet the requirements of Sections 264.19, 264.221, 264.222 and 264.223 of this Chapter, addressing the following items:

(1) The liner system (except for an existing portion of a surface impoundment). If an exemption from the requirement for a liner is sought as provided by Section 264.221(b), submit detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time;

(2) The double liner and leak (leachate) detection, collection, and removal system, if the surface impoundment must meet the requirements of Section 264.221(c) of this Chapter. If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by Section 264.221(d), (e), or (f) of this Chapter, submit appropriate information;

(3) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;

(4) The construction quality assurance (CQA) plan if required under Section 264.19 of this Chapter;

(5) Proposed action leakage rate, with rationale, if required under Section 264.222 of this chapter, and response action plan, if required under Section 264.223 of this Chapter;

(c) A description of how each surface impoundment, including the double liner system, leak detection system, cover system and appurtenances for control of overtopping, will be inspected in order to meet the requirements of Section 264.226(a), (b), and (d) of this Chapter. This information should be included in the inspection plan submitted under Section 270.14(b)(5);

(d) A certification by a qualified engineer which attests to the structural integrity of each dike, as required under Section 264.226(c). For new units, the owner or operator must submit a statement by a qualified engineer that he will provide such a certification upon completion of construction in accordance with the plans and specifications;

(e) A description of the procedure to be used for removing a surface impoundment from service, as required under Section 264.227(b) and (c). This information should be included in the contingency plan submitted under Section 270.14(b)(7);
(f) A description of how hazardous waste residues and contaminated materials will be removed from the unit at closure, as required under Section 264.228(a)(1). For any wastes not to be removed from the unit upon closure, the owner or operator must submit detailed plans and an engineering report describing how Section 264.228(a)(2) and (b) will be complied with. This information should be included in the closure plan and, where applicable, the post-closure plan submitted under Section 270.14(b)(13);
(g) If ignitable or reactive wastes are to be placed in a surface impoundment, an explanation of how Section 264.229 will be complied with;
(h) If incompatible wastes, or incompatible wastes and materials will be placed in a surface impoundment, an explanation of how Section 264.230 will be complied with.
(i) A waste management plan for EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027 describing how the surface impoundment facility is or will be designed, constructed, operated, and maintained to meet the requirements of section 264.231. This submission must address the following items as specified in Section 264.231:
    (1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;
    (2) The attenuative properties of underlying and surrounding soils or other materials;
    (3) The mobilizing properties of other materials co-disposed with these wastes; and
    (4) The effectiveness of additional treatment, design, or monitoring techniques.
(j) Information on air emission control equipment as required in Section 270.27.

270.18 Specific Part B information requirements for waste piles.

Except as otherwise provided in Section 264.1, owners and operators of facilities that store or treat hazardous waste in waste piles must provide the following additional information:
(a) A list of hazardous wastes placed or to be placed in each waste pile;
(b) If an exemption is sought to Section 264.251 and Subpart F of Part 264 as provided by Section 264.250(c) or section 264.90(2), an explanation of how the standards of Section 264.250(c) will be complied with or detailed plans and an engineering report describing how the requirements of Section 264.90(b)(2) will be met.
(c) Detailed plans and an engineering report describing how the waste pile is designed and is or will be constructed, operated and maintained to meet the requirements of Sections 264.19, 264.251, 264.252, and 264.253 of this Chapter addressing the following items:
    (1) The liner system (except for an existing portion of a pile). If an exemption from the requirement for a liner is sought, as provided by Section 264.252(b), the owner or operator must submit detailed plans and engineering and hydrogeologic reports, as applicable, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time;
        (i) The liner system (except for an existing portion of a waste pile), if the waste pile must meet the requirements of Section 264.251(a) of this Chapter. If an exemption from the requirement for a liner is sought as provided by Section 264.251(b) of this Chapter, submit detailed plans, and engineering and hydrogeological reports, as appropriate, describing alternate designs and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time;
        (ii) The double liner and leak (leachate) detection, collection, and removal system, if the waste pile must meet the requirements of Section 264.251(c) of this chapter. If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by Section 264.251(d), (e), or (f) of this Chapter, submit appropriate information;
        (iii) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;.
        (iv) The construction quality assurance (CQA) plan if required under Section 264.19 of this Chapter;
        (v) Proposed action leakage rate, with rationale, if required under Section 264.252 of this Chapter, and response action plan, if required under Section 264.253 of this Chapter;
    (2) Control of run-on;
    (3) Control of run-off;
    (4) Management of collection and holding units associated with run-on and run-off control systems; and

(5) Control of wind dispersal of particulate matter, where applicable;

(d) A description of how each waste pile, including the double liner system, leak detection system, cover system, and appurtenances for control of run-on and run-off, will be inspected in order to meet the requirements of Section 264.254(a), (b), and (c) of this Chapter. This information should be included in the inspection plan submitted under section 270.14(b)(5).

(e) If treatment is carried out on or in the pile, details of the process and equipment used, and the nature and quality of the residuals;

(f) If ignitable or reactive wastes are to be placed in a waste pile, an explanation of how the requirements of Section 264.256 will be complied with;

(g) If incompatible wastes, or incompatible wastes and materials will be placed in a waste pile, an explanation of how Section 264.257 will be complied with;

(h) A description of how hazardous waste residues and contaminated materials will be removed from the waste pile at closure, as required under Section 264.258(a). For any waste not to be removed from the waste pile upon closure, the owner or operator must submit detailed plans and an engineering report describing how Section 264.310(a) and (b) will be complied with. This information should be included in the closure plan and, where applicable, the post-closure plan submitted under Section 270.14(b)(13).

(i) A waste management plan for EPA Hazardous Waste Nos. FO20, FO21, FO22, FO23, FO26, and FO27 describing how a waste pile that is not enclosed [as defined in Section 264.250(c)] is or will be designed, constructed, operated, and maintained to meet the requirements of Section 264.259. This submission must address the following items as specified in Section 264.259:
   (1) The volume, physical, and chemical characteristics of the wastes to be disposed in the waste pile, including their potential to migrate through soil or to volatilize or escape into the atmosphere;
   (2) The attenuative properties of underlying and surrounding soils or other materials;
   (3) The mobilizing properties of other materials co-disposed with these wastes; and
   (4) The effectiveness of additional treatment, design, or monitoring techniques.

270.19 Specific Part B Information requirements for incinerators.

Except as Section 264.340 of this chapter provides otherwise, owners and operators of facilities that incinerate hazardous waste must fulfill the requirements of (a), (b), or (c) of this section.

(a) When seeking an exemption under Section 264.340 (b) or (c) of this chapter (Ignitable, corrosive, or reactive wastes only):
   (1) Documentation that the waste is listed as a hazardous waste in Part 261, Subpart D of this chapter, solely because it is ignitable (Hazard Code I) or corrosive (Hazard Code C) or both; or
   (2) Documentation that the waste is listed as a hazardous waste in Part 261, Subpart D of this chapter, solely because it is reactive (Hazard Code R) for characteristics other than those listed in Section 261.23(a) (4) and (5) of this chapter, and will not be burned when other hazardous wastes are present in the combustion zone; or
   (3) Documentation that the waste is a hazardous waste solely because it possesses the characteristic of ignitability, corrosivity, or both, as determined by the tests for characteristics of hazardous waste under Part 261, Subpart C of this chapter; or
   (4) Documentation that the waste is a hazardous waste solely because it possesses the reactivity characteristics listed in Section 261.23(a)(1),(2),(3),(6), (7), or (8) of this chapter, and that it will not be burned when other hazardous wastes are present in the combustion zone; or

(b) Submit a trial burn plan or the results of a trial burn, including all required determinations, in accordance with Section 270.62; or

(c) In lieu of a trial burn, the applicant may submit the following information:
   (1) An analysis of each waste or mixture of wastes to be burned, including:
      (i) Heat value of the waste in the form and composition in which it will be burned.
      (ii) Viscosity (if applicable), or description of physical form of the waste.
      (iii) An identification of any hazardous organic constituents listed in Part 261, Appendix VIII, of this chapter, which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in Part 261, Appendix VIII, of this chapter which would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified and the basis for their exclusion stated. The waste analysis must rely on analytical techniques specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11 of this chapter and §270.6, or their equivalent.

(iv) An approximate quantification of the hazardous constituents identified in the waste, within the precision produced by the analytical methods specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §270.11 of this chapter and §270.6.

(v) A quantification of those hazardous constituents in the waste which may be designated as POHC's based on data submitted from other trial or operational burns which demonstrate compliance with the performance standards in Section 264.343 of this chapter.

(2) A detailed engineering description of the incinerator, including:

(i) Manufacturer's name and model number of incinerator.
(ii) Type of incinerator.
(iii) Linear dimension of incinerator unit including cross sectional area of combustion chamber.
(iv) Description of auxiliary fuel system (type/feed).
(v) Capacity of prime mover.
(vi) Description of automatic waste feed cutoff system(s).
(vii) Stack gas monitoring and pollution control monitoring system.
(viii) Nozzle and burner design.
(ix) Construction materials.
(x) Location and description of temperature, pressure, and flow indicating devices and control devices.

(3) A description and analysis of the waste to be burned compared with the waste for which data from operational or trial burns are provided to support the contention that a trial burn is not needed. The data should include those items listed in paragraph (c)(1) of this section. This analysis should specify the POHC's which the applicant has identified in the waste for which a permit is sought, and any differences from the POHC's in the waste for which burn data are provided.

(4) The design and operating conditions of the incinerator unit to be used, compared with that for which comparative burn data are available.

(5) A description of the results submitted from any previously conducted trial burn(s), including:

(i) Sampling and analysis techniques used to calculate performance standards in Section 264.343 of this chapter.
(ii) Methods and results of monitoring temperatures, waste feed rates, carbon monoxide, and an appropriate indicator of combustion gas velocity (including a statement concerning the precision and accuracy of this measurement),

(6) The expected incinerator operation information to demonstrate compliance with Sections 264.343 and 264.345 of this chapter, including:

(i) Expected carbon monoxide (CO) level in the stack exhaust gas.
(ii) Waste feed rate.
(iii) Combustion zone temperature.
(iv) Indication of combustion gas velocity.
(v) Expected stack gas volume, flow rate, and temperature.
(vi) Computed residence time for waste in the combustion zone.
(vii) Expected hydrochloric acid removal efficiency.
(viii) Expected fugitive emissions and their control procedures.
(ix) Proposed waste feed cut-off limits based on the identified significant operating parameters.

(7) Such supplemental information as the Director finds necessary to achieve the purposes of this paragraph.

(8) Waste analysis data, including that submitted in paragraph (c)(1) of this section, sufficient to allow the Director to specify as permit Principal Organic Hazardous Constituents (permit POHC's) those constituents for which destruction and removal efficiencies will be required.

(d) The Director shall approve a permit application without a trial burn if he finds that:

(1) The wastes are sufficiently similar; and

(2) The incinerator units are sufficiently similar, and the data from other trial burns are adequate to specify (under Section 264.345 of this chapter) operating conditions that will ensure that the performance standards in Section 264.343 of this chapter will be met by the incinerator.

270.20 Specific Part B information requirements for Land Treatment Facilities:

Except as otherwise provided in Section 264.1, owners and operators of facilities that use land treatment to dispose of hazardous waste must provide the following additional information:

(a) A description of plans to conduct a treatment demonstration as required under Section 264.272. The description must include the following information:

(1) The wastes for which the demonstration will be made and the potential hazardous constituents in the waste;
(2) The data sources to be used to make the demonstration (e.g., literature, laboratory data, field data, or operating data);
(3) Any specific laboratory or field test that will be conducted, including:
(i) The type of test (e.g., column leaching, degradation);
(ii) Materials and methods, including analytical procedures;
(iii) Expected time for completion;
(iv) Characteristics of the unit that will be simulated in the demonstration, including treatment zone characteristics, climatic conditions, and operating practices.

(b) A description of a land treatment program as required under Section 264.271. This information must be submitted with the plans for the treatment demonstration and updated following the treatment demonstration. The land treatment program must address the following items:
(1) The wastes to be land treated;
(2) Design measures and operating practices necessary to maximize treatment in accordance with Section 264.273(a) including:
(i) Waste application method and rate;
(ii) Measures to control soil pH;
(iii) Enhancement of microbial or chemical reactions;
(iv) Control of moisture content;
(3) Provisions for unsaturated zone monitoring, including:
(i) Sampling equipment, procedures, and frequency;
(ii) Procedures for selecting sampling locations;
(iii) Analytical procedures;
(iv) Chain of custody control;
(v) Procedures for establishing background values;
(vi) Statistical methods for interpreting results;
(vii) The justification for any hazardous constituents recommended for selection as principal hazardous constituents, in accordance with the criteria for such selection in Section 264.278(a);
(4) A list of hazardous constituents reasonably expected to be in, or derived from, the wastes to be land treated based on waste analysis performed pursuant to Section 264.13;
(5) The proposed dimensions of the treatment zone;

(c) A description of how the unit is or will be designed, constructed, operated, and maintained in order to meet the requirements of Section 264.273. This submission must address the following items:
(1) Control of run-on;
(2) Collection and control of run-off;
(3) Minimization of run-off of hazardous constituents from the treatment zone;
(4) Management of collection and holding facilities associated with run-on and run-off control systems;
(5) Periodic inspection of the unit. This information should be included in the inspection plan submitted under Section 270.14(b)(5);
(6) Control of wind dispersal of particulate matter, if applicable;

(d) If food-chain crops are to be grown in or on the treatment zone of the land treatment unit, a description of how the demonstration required under Section 264.276(a) will be conducted including:
(1) Characteristics of the food-chain crop for which the demonstration will be made.
(2) Characteristics of the waste, treatment zone, and waste application method and rate to be used in the demonstration;
(3) Procedures for crop growth sample collection, sample analysis, and data evaluation;
(4) Characteristics of the comparison crop including the location and conditions under which it was or will be grown.

(e) If food-chain crops are to be grown, and cadmium is present in the land treated waste, a description of how the requirements of Section 264.276(b) will be complied with.

(f) A description of the vegetative cover to be applied to closed portions of the facility, and a plan for maintaining such cover during the post-closure care period, as required under Section 264.280(a)(8) and 264.280(c)(2). This information should be included in the closure plan and, where applicable, the post-closure care plan submitted under Section 270.14(b)(13).

(g) If ignitable or reactive wastes will be placed in or on the treatment zone, an explanation of how the requirements of Section 264.281 will be complied with.

(h) If incompatible wastes, or incompatible waste materials, and materials, will be placed in or on the same treatment zone, an explanation of how Section 264.282 will be complied with.

(i) A waste management plan for EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027 describing how a land treatment facility is or will be designed, constructed, operated, and maintained to meet the requirements of section 264.283. This submission must address the following items as specified in section 264.283:
  (1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;
  (2) The attenuative properties of underlying and surrounding soils or other materials;
  (3) The mobilizing properties of other materials co-disposed with these wastes; and
  (4) The effectiveness of additional treatment, design, or monitoring techniques.

270.21 Specific Part B Information Requirements for Landfills.

Except as otherwise provided in Section 264.1, owners and operators of facilities that dispose of hazardous waste in landfills must provide the following additional information:

(a) A list of hazardous wastes placed or to be placed in each landfill or landfill cell;

(b) Detailed plans and an engineering report describing how the landfill is designed and is or will be constructed, operated, and maintained to meet the requirements of Sections 264.19, 264.301, 264.302, and 264.303 of this Chapter, addressing the following items:
  (1) The liner system and leachate collection and removal system (except for an existing portion of a landfill). If an exemption from the requirements for a liner and a leachate collection and removal system is sought as provided by Section 264.301(b), submit detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituent into the ground water or surface water at any future time;
    (i) The liner system (except for an existing portion of a landfill), if the landfill must meet the requirements of Section 264.301(a) of this chapter. If an exemption from the requirement for a liner is sought as provided by Section 264.301(b) of this chapter, submit detailed plans, and engineering and hydrogeological reports, as appropriate, describing alternate designs and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous constituents into the ground water or surface water at any future time;
    (ii) The double liner and leak (leachate) detection, collection, and removal system, if the landfill must meet the requirements of Section 264.301(c) of this chapter. If an exemption from the requirements for double liners and a leak detection, collection, and removal system or alternative design is sought as provided by Section 264.301(d), (e), or (f) of this chapter, submit appropriate information;
    (iii) If the leak detection system is located in a saturated zone, submit detailed plans and an engineering report explaining the leak detection system design and operation, and the location of the saturated zone in relation to the leak detection system;
    (iv) The construction quality assurance (CQA) plan if required under Section 264.19 of this chapter;
    (v) Proposed action leakage rate, with rationale, if required under Section 264.302 of this chapter, and response action plan, if required under Section 264.303 of this chapter.
  (2) Control of run-on;
  (3) Control of run-off;
  (4) Management of collection and holding facilities associated with run-on and run-off control systems; and
  (5) Control of wind dispersal of particulate matter, where applicable.

(c) A description of how each landfill, including the double liner system, leachate collection and removal system, leak detection system, cover system, and appurtenances for control of run-on and run-off, will be inspected in order to meet the requirements of Section 264.303(a), (b), and (c) of this chapter. This information must be included in the inspection plan submitted under Section 270.14(b)(5);

(d) A description of how each landfill, including the liner and cover systems, will be inspected in order to meet the requirements of Section 264.303 (a) and (b). This information should be included in the inspection plan submitted under Section 270.14(b)(5).

(e) Detailed plans and an engineering report describing the final cover which will be applied to each landfill or landfill cell at closure in accordance with Section 264.310(a), and a description of how each landfill will be maintained and monitored after closure in accordance with Section 264.310(b). This information should be included in the closure and post-closure plans submitted under Section 270.14(b)(13).

(f) If ignitable or reactive wastes will be landfilled, an explanation of how the standards of Section 264.312 will be complied with.

(g) If incompatible wastes, or incompatible wastes and materials will be landfilled, an explanation of how Section 264.313 will be complied with.

(h) If bulk or non-containerized liquid waste or wastes containing free liquids is to be landfilled prior to May 8, 1985, an explanation of how the requirements of Section 264.314(a) will be complied with.

(i) If containers of hazardous waste are to be landfilled, an explanation of how the requirements of Section 264.315 or 264.316, as applicable, will be complied with.

(j) A waste management plan for EPA Hazardous Waste Nos. FO20, FO21, FO22, FO23, FO26, and FO27 describing how a landfill is or will be designed, constructed, operated, and maintained to meet the requirements of Section 264.317. This submission must address the following items as specified in Section 264.317:

(1) The volume, physical, and chemical characteristics of the wastes, including their potential to migrate through soil or to volatilize or escape into the atmosphere;

(2) The attenuative properties of underlying and surrounding soils or other materials;

(3) The mobilizing properties of other materials co-disposed with these wastes; and

(4) The effectiveness of additional treatment, design, or monitoring techniques.

270.22 Specific Part B information requirements for boilers and industrial furnaces burning hazardous waste.

(a) *Trial burns--*

(1) *General.* Except as provided below, owners and operators that are subject to the standards to control organic emissions provided by Section 266.104 of this chapter, standards to control particulate matter provided by Section 266.105 of this chapter, standards to control metals emissions provided by Section 266.106 of this chapter, or standards to control hydrogen chloride or chlorine gas emissions provided by Section 266.107 of this chapter must conduct a trial burn to demonstrate conformance with those standards and must submit a trial burn plan or the results of a trial burn. including all required determinations, in accordance with Section 270.66.

(i) A trial burn to demonstrate conformance with a particular emission standard may be waived under provisions of Sections 266.104 through 266.107 of this chapter and paragraphs (a)(2) through (a)(5) of this section; and

(ii) The owner or operator may submit data in lieu of a trial burn, as prescribed in paragraph (a)(6) of this section.

(2) *Waiver of trial burn for DRE--*

(i) *Boilers operated under special operating requirements.* When seeking to be permitted under Sections 266.104(a)(4) and 266.110 of this chapter that automatically waive the DRE trial burn, the owner or operator of a boiler must submit documentation that the boiler operates under the special operating requirements provided by Section 266.110 of this chapter.

(ii) *Boilers and industrial furnaces burning low risk waste.* When seeking to be permitted under the provisions for low risk waste provided by Sections 266.104(a)(5) and 266.109(a) of this chapter that waive the DRE trial burn, the owner or operator must submit:

(A) Documentation that the device is operated in conformance with the requirements of Section 266.109(a)(1) of this chapter.

(B) Results of analyses of each waste to be burned, documenting the concentrations of nonmetal compounds listed in appendix VIII of part 261 of this chapter, except for those constituents that would reasonably not be expected to be in the waste. The constituents excluded from analysis must be identified and the basis for their exclusion explained. The analysis must rely on analytical techniques specified in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (incorporated by reference, see Section 260.11).

(C) Documentation of hazardous waste firing rates and calculations of reasonable, worst-case emission rates of each constituent identified in paragraph (a)(2)(ii)(B) of this section using procedures provided by Section 266.109(a)(2)(ii) of this chapter.

(D) Results of emissions dispersion modeling for emissions identified in paragraphs (a)(2)(ii)(C) of this section using modeling procedures prescribed by Section 266.106(h) of this chapter. The Director will review the emission modeling conducted by the applicant to determine conformance with these procedures. The Director will either approve the modeling or determine that alternate or supplementary modeling is appropriate.

(E) Documentation that the maximum annual average ground level concentration of each constituent identified in paragraph (a)(2)(ii)(B) of this section quantified in conformance with paragraph (a)(2)(ii)(D) of this section does not exceed the allowable ambient level

established in appendices IV or V of part 266. The acceptable ambient concentration for emitted constituents for which a specific Reference Air Concentration has not been established in appendix IV or Risk-Specific Dose has not been established in appendix V is 0.1 micrograms per cubic meter, as noted in the footnote to appendix IV.

(3) *Waiver of trial burn for metals.* When seeking to be permitted under the Tier I (or adjusted Tier I) metals feed rate screening limits provided by Section 266.106(b) and (e) of this chapter that control metals emissions without requiring a trial burn, the owner or operator must submit:

(i) Documentation of the feed rate of hazardous waste, other fuels, and industrial furnace feed stocks;

(ii) Documentation of the concentration of each metal controlled by Section 266.106(b) or (e) of this chapter in the hazardous waste, other fuels, and industrial furnace feedstocks, and calculations of the total feed rate of each metal;

(iii) Documentation of how the applicant will ensure that the Tier I feed rate screening limits provided by Section 266.106(b) or (e) of this chapter will not be exceeded during the averaging period provided by that paragraph;

(iv) Documentation to support the determination of the terrain-adjusted effective stack height, good engineering practice stack height, terrain type, and land use as provided by Section 266.106(b)(3) through (b)(5) of this chapter;

(v) Documentation of compliance with the provisions of Section 266.106(b)(6), if applicable, for facilities with multiple stacks;

(vi) Documentation that the facility does not fail the criteria provided by Section 266.106(b)(7) for eligibility to comply with the screening limits; and

(vii) Proposed sampling and metals analysis plan for the hazardous waste, other fuels, and industrial furnace feed stocks.

(4) *Waiver of trial burn for particulate matter.* When seeking to be permitted under the low risk waste provisions of Section 266.109(b) which waives the particulate standard (and trial burn to demonstrate conformance with the particulate standard), applicants must submit documentation supporting conformance with paragraphs (a)(2)(ii) and (a)(3) of this section.

(5) *Waiver of trial burn for HCL and Cl_2.* When seeking to be permitted under the Tier I (or adjusted Tier I) feed rate screening limits for total chloride and chlorine provided by Section 266.107(b)(1) and (e) of this chapter that control emissions of hydrogen chloride (HCL) and chlorine gas (CL_2) without requiring a trial burn, the owner or operator must submit:

(i) Documentation of the feed rate of hazardous waste, other fuels, and industrial furnace feed stocks;

(ii) Documentation of the levels of total chloride and chlorine in the hazardous waste, other fuels, and industrial furnace feedstocks, and calculations of the total feed rate of total chloride and chlorine;

(iii) Documentation of how the applicant will ensure that the Tier I (or adjusted Tier I) feed rate screening limits provided by Section 266.107(b)(1) or (e) of this chapter will not be exceeded during the averaging period provided by that paragraph;

(iv) Documentation to support the determination of the terrain-adjusted effective stack height, good engineering practice stack height, terrain type, and land use as provided by Section 266.107(b)(3) of this chapter;

(v) Documentation of compliance with the provisions of Section 266.107(b)(4), if applicable, for facilities with multiple stacks;

(vi) Documentation that the facility does not fail the criteria provided by Section 266.107(b)(3) for eligibility to comply with the screening limits; and

(vii) Proposed sampling and analysis plan for total chloride and chlorine for the hazardous waste, other fuels, and industrial furnace feedstocks.

(6) *Data in lieu of trial burn.* The owner or operator may seek an exemption from the trial burn requirements to demonstrate conformance with Sections 266.104 through 266.107 of this chapter and Section 270.66 by providing the information required by Section 270.66 from previous compliance testing of the device in conformance with Section 266.103 of this chapter, or from compliance testing or trial or operational burns of similar boilers or industrial furnaces burning similar hazardous waste under similar conditions.

If data from a similar device is used to support a trial burn waiver, the design and operating information required by Section 270.66 must be provided for both the similar device and the device to which the data is to be applied, and a comparison of the design and operating information must be provided. The Director shall approve a permit application without a trial burn if he finds that the hazardous wastes are sufficiently similar, the devices are sufficiently similar, the operating conditions are sufficiently similar, and the data from other compliance tests, trial burns, or operational burns are adequate to specify (under Section 266.102 of this chapter) operating conditions that will ensure conformance with Section 266.102(c) of this chapter. If addition, the following information shall be submitted:

(i) *For a waiver from any trial burn*:
(A) A description and analysis of the hazardous waste to be burned compared with the hazardous waste for which data from compliance testing, or operational or trial burns are provided to support the contention that a trial burn is not needed;
(B) The design and operating conditions of the boiler or industrial furnace to be used, compared with that for which comparative burn data are available; and
(C) Such supplemental information as the Director finds necessary to achieve the purposes of this paragraph.

(ii) For a waiver of the DRE trial burn, the basis for selection of POHCs used in the other trial or operational burns which demonstrate compliance with the DRE performance standard in Section 266.104(a) of this chapter. This analysis should specify the constituents in appendix VIII, part 261 of this chapter, that the applicant has identified in the hazardous waste for which a permit is sought, and any differences from the POHCs in the hazardous waste for which burn data are provided.

(b) *Alternative HC limit for industrial furnaces with organic matter in raw materials.* Owners and operators of industrial furnaces requesting an alternative HC limit under Section 266.104(f) of this chapter shall submit the following information at a minimum:
(1) Documentation that the furnace is designed and operated to minimize HC emissions from fuels and raw materials;
(2) Documentation of the proposed baseline flue gas HC (and (CO) concentration, including data on HC (and CO) levels during tests which the facility produced normal products under normal operating conditions from normal raw materials while burning normal fuels and when not burning hazardous waste;
(3) Test burn protocol to confirm the baseline HC (and CO) level including information on the type and flow rate of all feedstreams, point of introduction of all feedstreams, total organic carbon content (or other appropriate measure of organic content) of all nonfuel feedstreams, and operating conditions that affect combustion of fuel(s) and destruction of hydrocarbon emissions from nonfuel sources;
(4) Trial burn plan to:
(i) Demonstrate that flue gas HC (and CO) concentrations when burning hazardous waste do not exceed the baseline HC (and CO) level; and
(ii) Identify the types and concentrations of organic compounds listed in appendix VIII, part 261 of this chapter, that are emitted when burning hazardous waste in conformance with procedures prescribed by the Director;
(5) Implementation plan to monitor over time changes in the operation of the facility that could reduce the baseline HC level and procedures to periodically confirm the baseline HC level; and
(6) Such other information as the Director finds necessary to achieve the purposes of this paragraph.

(c) *Alternative metals implementation approach.* When seeking to be permitted under an alternative metals implementation approach under Section 266.106(f) of this chapter, the owner or operator must submit documentation specifying how the approach ensures compliance with the metals emissions standards of Section 266.106(c) or (d) and how the approach can be effectively implemented and monitored. Further, the owner or operator shall provide such other information that the Director finds necessary to achieve the purposes of this paragraph.

(d) *Automatic waste feed cutoff system.* Owners and operators shall submit information describing the automatic waste feed cutoff system, including any pre-alarm systems that may be used.

(e) *Direct transfer.* Owners and operators that use direct transfer operations to feed hazardous waste from transport vehicles (containers, as defined in Section 266.111 of this chapter) directly to the boiler or industrial furnace shall submit information supporting conformance with the standards for direct transfer provided by Section 266.111 of this chapter.

(f) *Residues.* Owners and operators that claim that their residues are excluded from regulation under the provisions of Section 266.112 of this chapter must submit information adequate to demonstrate conformance with those provisions.

270.23 Specific Part B information requirements for miscellaneous units.

Except as otherwise provided in Section 264.600, owners and operators of facilities that treat, store, or dispose of hazardous waste in miscellaneous units must provide the following additional information:

(a) A detailed description of the unit being used or proposed for use including the following:
(1) Physical characteristics, materials of construction, and dimensions of the unit;

(2) Detailed plans and engineering reports describing how the unit will be located, designed, constructed, operated, maintained, monitored, inspected, and closed to comply with the requirements of Sections 264.601 and 264.602; and

(3) For disposal units, a detailed description of the plans to comply with the post-closure requirements of Section 264.603.

(b) Detailed hydrologic, geologic, and meteorologic assessments and land-use maps for the region surrounding the site that address and ensure compliance of the unit with each factor in the environmental performance standards of Section 264.601. If the applicant can demonstrate that he does not violate the environmental performance standards of Section 264.601 and the Director agrees with such demonstration, preliminary hydrologic, geologic, and meteorologic assessments will suffice.

(c) Information on the potential pathways of exposure of humans or environmental receptors to hazardous waste or hazardous constituents and on the potential magnitude and nature of such exposures.

(d) For any treatment unit, a report on a demonstration of the effectiveness of the treatment based on laboratory or field data.

(e) Any additional information determined by the Director to be necessary for evaluation of compliance of the unit with the environmental performance standards of Section 264.601.

270.24 Specific Part B information requirements for process vents.

Except as otherwise provided in Section 264.1 owners and operators of facilities that have process vents to which subpart AA of part 264 applies must provide the following additional information:

(a) For facilities that cannot install a closed-vent system and control device to comply with the provisions of 40 CFR 264 subpart AA on the effective date that the facility becomes subject to the provisions of 40 CFR 264 or 265 subpart AA, an implementation schedule as specified in Section 264.1033(a)(2).

(b) Documentation of compliance with the process vent standards in Section 264.1032, including:

(1) Information and data identifying all affected process vents, annual throughput and operating hours of each affected unit, estimated emission rates for each affected vent and for the overall facility (i.e. the total emissions for all affected vents at the facility), and the approximate location within the facility of each affected unit (e.g., identify the hazardous waste management units on a facility plot plan).

(2) Information and data supporting estimates of vent emissions and emission reduction achieved by add-on control devices based on engineering calculations or source tests. For the purpose of determining compliance, estimates of vent emissions and emission reductions must be made using operating parameter values (e.g., temperatures, flow rates, or concentrations) that represent the conditions that exist when the waste management unit is operating at the highest load or capacity level reasonably expected to occur.

(3) Information and data used to determine whether or not a process vent is subject to the requirements of Section 264.1032.

(c) Where an owner or operator applies for permission to use a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system to comply with the requirements of Section 264.1032, and chooses to use test data to determine the organic removal efficiency or the total organic compound concentration achieved by the control device, a performance test plan as specified in Section 264.1035(b)(3).

(d) Documentation of compliance with Section 264.1033, including:

(1) A list of all information references and sources used in preparing the documentation.

(2) Records, including the dates, of each compliance test required by Section 264.1033(k).

(3) A design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "APTI Course 415: Control of Gaseous Emissions" (incorporated by reference as specified in Section 260.11) or other engineering texts acceptable to the Regional Administrator that present basic control device design information. The design analysis shall address the vent stream characteristics and control device operation parameters as specified in Section 264.1035(b)(4)(iii).

(4) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is or would be operating at the highest load or capacity level reasonably expected to occur.

(5) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of 95 weight percent or greater unless the total organic

emission limits of Section 264.1032(a) for affected process vents at the facility can be attained by a control device involving vapor recovery at an efficiency less than 95 weight percent.

270.25 Specific part B information requirements for equipment.

Except as otherwise provided in Section 264.1, owners and operators of facilities that have equipment to which subpart BB of part 264 applies must provide the following additional information:

(a) For each piece of equipment to which subpart BB of part 264 applies:
  (1) Equipment identification number and hazardous waste management unit identification.
  (2) Approximate locations within the facility (e.g., identify the hazardous waste management unit on a facility plot plan).
  (3) Type of equipment (e.g., a pump or pipeline valve).
  (4) Percent by weight total organics in the hazardous waste stream at the equipment.
  (5) Hazardous waste state at the equipment (e.g.; gas/vapor or liquid).
  (6) Method of compliance with the standard (e.g., "monthly leak detection and repair" or "equipped with dual mechanical seals").

(b) For facilities that cannot install a closed-vent system and control device to comply with the provisions of 40 CFR 264 subpart BB on the effective date that the facility becomes subject to the provisions of 40 CFR 264 or 265 subpart BB, an implementation schedule as specified in Section 264.1033(a)(2).

(c) Where an owner or operator applies for permission to use a control device other than a thermal vapor incinerator, catalytic vapor incinerator, flare, boiler, process heater, condenser, or carbon adsorption system and chooses to use test data to determine the organic removal efficiency or the total organic compound concentration achieved by the control device, a performance test plan as specified in Section 264.1035(b)(3).

(d) Documentation that demonstrates compliance with the equipment standards in Sections 264.1052 to 264.1059. This documentation shall contain the records required under Section 264.1064. The Regional Administrator may request further documentation before deciding if compliance has been demonstrated.

(e) Documentation to demonstrate compliance with Section 264.1060 shall include the following information:
  (1) A list of all information references and sources used in preparing the documentation.
  (2) Records, including the dates, of each compliance test required by Section 264.1033(j).
  (3) A design analysis, specifications, drawings, schematics, and piping and instrumentation diagrams based on the appropriate sections of "ATPI Course 415: Control of Gaseous Emissions" (incorporated by reference as specified in Section 260.11) or other engineering texts acceptable to the Regional Administrator that present basic control device design information. The design analysis shall address the vent stream characteristics and control device operation parameters as specified in Section 264.1035(b)(4)(iii).
  (4) A statement signed and dated by the owner or operator certifying that the operating parameters used in the design analysis reasonably represent the conditions that exist when the hazardous waste management unit is operating at the highest load or capacity level reasonably expected to occur.
  (5) A statement signed and dated by the owner or operator certifying that the control device is designed to operate at an efficiency of 95 weight percent or greater.

270.26 Special Part B information requirements for drip pads.

Except as otherwise provided by Section 264.1 of this chapter, owners and operators of hazardous waste treatment, storage, or disposal facilities that collect, store, or treat hazardous waste on drip pads must provide the following additional information:

(a) A list of hazardous wastes placed or to be placed on each drip pad.

(b) If an exemption is sought to subpart F of part 264 of this chapter, as provided by Section 264.90 of this chapter, detailed plans and an engineering report describing how the requirements of Section 264.90(b)(2) of this chapter will be met.

(c) Detailed plans and an engineering report describing how the drip pad is or will be designed, constructed, operated and maintained to meet the requirements of Section 264.573 of this chapter, including the as-built drawings and specifications. This submission must address the following items as specified in Section 264.571 of this chapter:
  (1) The design characteristics of the drip pad;
  (2) The liner system;

(3) The leakage detection system, including the leak detection system and how it is designed to detect the failure of the drip pad or the failure of the drip pad or the presence of any releases of hazardous waste or accumulated liquid at the earliest practicable time;
(4) Practices designed to maintain drip pads;
(5) The associated collection system;
(6) Control of run-on to the drip pad;
(7) Control of run-off from the drip pad;
(8) The interval at which drippage and other materials will be removed from the associated collection system and a statement demonstrating that the interval will be sufficient to prevent overflow onto the drip pad;
(9) Procedures for cleaning the drip pad at least once every seven days to ensure the removal of any accumulated residues of waste or other materials, including but not limited to rinsing, washing with detergents or other appropriate solvents, or steam cleaning and provisions for documenting the date, time, and cleaning procedure used each time the pad is cleaned.
(10) Operating practices and procedures that will be followed to ensure that tracking of hazardous waste or waste constituents off the drip pad due to activities by personnel or equipment is minimized;
(11) Procedures for ensuring that, after removal from the treatment vessel, treated wood from pressure and non-pressure processes is held on the drip pad until drippage has ceased, including recordkeeping practices;
(12) Provisions for ensuring that collection and holding units associated with the run-on and run-off control systems are emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system;
(13) If treatment is carried out on the drip pad, details of the process equipment used, and the nature and quality of the residuals.
(14) A description of how each drip pad, including appurtenances for control of run-on and run-off, will be inspected in order to meet the requirements of Section 264.573 of this chapter. This information should be included in the inspection plan submitted under Section 270.14(b)(5) of this part.
(15) A certification signed by an independent qualified, registered professional engineer, stating that the drip pad design meets the requirements of paragraphs (a) through (f) of Section 264.573 of this chapter.
(16) A description of how hazardous waste residues and contaminated materials will be removed from the drip pad at closure, as required under Section 264.575(a) of this chapter. For any waste not to be removed from the drip pad upon closure, the owner or operator must submit detailed plans and an engineering report describing how Section 264.310 (a) and (b) of this chapter will be complied with. This information should be included in the closure plan and, where applicable, the post-closure plan submitted under Section 270.14(b)(13).

270.27 Specific Part B information requirements for air emission controls for tanks, surface impoundments, and containers.

(a) Except as otherwise provided in 40 CFR 264.1, owners and operators of tanks, surface impoundments, or containers that use air emission controls in accordance with the requirements of 40 CFR part 264, Subpart CC shall provide the following additional information:
(1) Documentation for each floating roof cover installed on a tank subject to 40 CFR 264.1084(d)(1) or 40 CFR 264.1084(d)(2) that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the applicable design specifications as listed in 40 CFR 264.1084(e)(1) or 40 CFR 264.1084(f)(1).
(2) Identification of each container area subject to the requirements of 40 CFR part 264, subpart CC and certification by the owner or operator that the requirements of this subpart are met.
(3) Documentation for each enclosure used to control air pollutant emissions from tanks or containers in accordance with the requirements of 40 CFR 264.1084(d)(5) of 40 CFR 264.1086(e)(1)(ii) that includes records for the most recent set of calculations and measurements performed by the owner or operator to verify that the enclosure meets the criteria of a permanent total enclosure as specified in "Procedure T– Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741, appendix B.
(4) Documentation for each floating membrane cover installed on a surface impoundment in accordance with the requirements of 40 CFR 264.1085(c) that includes information prepared by the owner or operator or provided by the cover manufacturer or vendor describing the cover design, and certification by the owner or operator that the cover meets the specifications listed in 40 CFR 264.1085(c)(1).

(5) Documentation for each closed-vent system and control device installed in accordance with the requirements of 40 CFR 264.1087 that includes design and performance information as specified in Section 270.24(c) and (d) of this part.
(6) An emission monitoring plan for both Method 21 in 40 CFR part 60, appendix A and control device monitoring methods. This plan shall include the following information; monitoring point(s), monitoring methods for control devices, monitoring frequency, procedures for documenting exceedances, and procedures for mitigating noncompliances.
(7) When an owner or operator of a facility subject to 40 CFR part 265, subpart CC cannot comply with 40 CFR part 264, subpart CC by the date of permit issuance, the schedule of implementation required under Section 265.1082.

§ 270.28 [Reserved]

270.29 Permit denial

The Director may, pursuant to the procedures in Part 124, deny the permit application either in its entirety or as to the active life of a hazardous waste management facility or unit only.

(c) The following are additional Part B information requirements for all hazardous waste facilities:

(1) Description and documentation of the public meetings as required in 15A NCAC 13A .0009 (r)(7);
(2) A description of the hydrological and geological properties of the site including, at a minimum, flood plains, depth to water table, ground water travel time, seasonal and long-term groundwater level fluctuations, proximity to public water supply watersheds, consolidated rock, soil pH, soil cation exchange capacity, soil characteristics and composition and permeability, existence of cavernous bedrock and seismic activity, slope, mines, climate, location and withdrawal rates of surface water users within the immediate drainage basin and well water users within a one-mile radius of the facility; water quality information of both surface and ground water within 1,000 ft. of the facility, and a description of the local air quality;
(3) A description of the facility's proximity to and potential impact on wetlands, endangered species habitats, parks, forests, wilderness areas, historical sites, mines, and air quality;
(4) A description of local land use including residential, industrial, commercial, recreational, agricultural and the proximity to schools and airports;
(5) A description of the proximity of the facility to waste generators and population centers; a description of the method of waste transportation; the comments of the local community and state transportation authority on the proposed route, and route safety. Comments should include proposed alternative routes and restrictions necessary to protect the public health;
(6) A description of facility aesthetic factors including visibility, appearance, and noise level; and
(7) A description of any other objective factors that the Department determines are reasonably related and relevant to the proper siting and operation of the facility.

(d) In addition to the specific Part B information requirements for hazardous waste disposal facilities, owners and operators of hazardous waste landfills or longterm storage facilities shall provide the following information:

(1) Design drawings and specifications of the leachate collection and removal system;
(2) Design drawings and specifications of the artificial impervious liner;
(3) Design drawings and specifications of the clay or clay-like liner below the artificial liner, and a description of the permeability of the clay or clay-like liner; and
(4) A description of how hazardous wastes will be treated prior to placement in the facility.

(e) In addition to the specific Part B information requirements for surface impoundments, owners and operators of surface impoundments shall provide the following information:

(1) Design drawings and specifications of the leachate collection and removal system;
(2) Design drawings and specifications of all artificial impervious liners;
(3) Design drawings and specifications of all clay or clay-like liners and a description of the clay or clay-like liner; and
(4) Design drawings and specifications that show that the facility has been constructed in a manner that will prevent landsliding, slippage, or slumping.

(f) 40 CFR 270.30 through 270.33 (Subpart C), "Permit Conditions", have been incorporated by reference including subsequent amendments and editions.

SUBPART C -- PERMIT CONDITIONS

270.30 Conditions applicable to all permits.

The following conditions apply to all RCRA permits, and shall be incorporated into the permits expressly or by reference. If incorporated by reference, a specific citation to these regulations (or the corresponding approved State regulations) must be given in the permit.

(a) *Duty to comply.* The permittee must comply with all conditions of this permit, except that the permittee need not comply with the conditions of this permit to the extent and for the duration such noncompliance is authorized in an emergency permit. (See Section 270.61). Any permit noncompliance, except under the terms of an emergency permit, constitutes a violation of the appropriate Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

(b) *Duty to reapply.* If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

(c) *Need to halt or reduce activity not a defense.* It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

(d) In the event of noncompliance with the permit, the permittee shall take all reasonable steps to minimize releases to the environment, and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment.

(e) *Proper operation and maintenance.* The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

(f) *Permit actions.* This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

(g) *Property rights.* The permit does not convey any property rights of any sort, or any exclusive privilege.

(h) *Duty to provide information.* The permittee shall furnish to the Director, within a reasonable time, any relevant information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

(i) *Inspection and entry.* The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law to:

(1) Enter at reasonable times upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(3) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(4) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by RCRA, any substances or parameters at any location.

(j) *Monitoring and records.*

(1) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

(2) The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, the certification required by section 264.73(b)(9) of this chapter, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report, certification, or application. This period may be extended by

request of the Director at any time. The permittee shall maintain records from all ground water monitoring wells and associated ground water surface elevations for the active life of the facility, and for disposal facilities for the post-closure care period as well.

(3) Records for monitoring information shall include:
  (i) The date, exact place, and time of sampling or measurements;
  (ii) The individual(s) who performed the sampling or measurements;
  iii) The date(s) analyses were performed;
  (iv) The individual(s) who performed the analyses;
  (v) The analytical techniques or methods used; and
  (vi) The results of such analyses.

(k) *Signatory requirements.* All applications, reports, or information submitted to the Director shall be signed and certified (See Section 270.11)

(l) *Reporting requirements.*

(1) *Planned changes.* The permittee shall give notice to the Director as soon as possible of any planned physical alterations or additions to the permitted facility.

(2) *Anticipated noncompliance.* The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. For a new facility, the permittee may not treat, store, or dispose of hazardous waste; and for a facility being modified, the permittee may not treat, store, or dispose of hazardous waste in the modified portion of the facility except as provided in Section 270.42, until:
  (i) The permittee has submitted to the Director by certified mail or hand delivery a letter signed by the permittee and a registered professional engineer stating that the facility has been constructed or modified in compliance with the permit; and
  (ii) (A) The Director has inspected the modified or newly constructed facility and finds it is in compliance with the conditions of the permit; or
  (B) Within 15 days of the date of submission of the letter in paragraph (1)(2)(i) of this section, the permittee has not received notice from the Director of his or her intent to inspect, prior inspection is waived and the permittee may commence treatment, storage, or disposal of hazardous waste.

(3) *Transfers.* This permit is not transferable to any person except after notice to the Director. The Director may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under RCRA. (See Section 270.40)

(4) *Monitoring reports.* Monitoring results shall be reported at the intervals specified elsewhere in this permit.

(5) *Compliance schedules.* Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

(6) *Twenty-four hour reporting.*
  (i) The permittee shall report any noncompliance which may endanger health or the environment orally within 24 hours from the time the permittee becomes aware of the circumstances, including:
    (A) Information concerning release of any hazardous waste that may cause an endangerment to public drinking water supplies.
    (B) Any information of a release or discharge of hazardous waste or of a fire or explosion from the HWM facility which could threaten the environment or human health outside the facility.
  (ii) The description of the occurrence and its cause shall include:
    (A) Name, address, and telephone number of the owner or operator;
    (B) Name, address, and telephone number of the facility;
    (C) Date, time, and type of incident;
    (D) Name and quantity of material(s) involved;
    (E) The extent of injuries, if any;
    (F) An assessment of actual or potential hazards to the environment and human health outside the facility, where this is applicable; and
    (G) Estimated quantity and disposition of recovered material that resulted from the incident.
  (iii) A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned

to reduce, eliminate, and prevent reoccurrence of the noncompliance. The Director may waive the five day written notice requirement in favor of a written report within fifteen days.

(7) *Manifest discrepancy report*: If a significant discrepancy in a manifest is discovered, the permittee must attempt to reconcile the discrepancy. If not resolved within fifteen days, the permittee must submit a letter report, including a copy of the manifest, to the Director. (See 40 CFR Section 264.72.)

(8) *Unmanifested waste report:* This report must be submitted to the Director within 15 days of receipt of unmanifested waste. (See 40 CFR Section 264.76)

(9) *Biennial report*: A biennial report must be submitted covering facility activities during odd numbered calendar years. (See 40 CFR Section 264.75.)

(10) *Other noncompliance.* The permittee shall report all instances of noncompliance not reported under paragraphs (1)(4),(5), and (6) of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (l)(6) of this section.

(11) *Other information.* Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

270.31 Requirements for recording and reporting of monitoring results.

All permits shall specify:

(a) Requirements concerning the proper use, maintenance, and installation, when appropriate, of monitoring equipment or methods (including biological monitoring methods when appropriate);

(b) Required monitoring including type, intervals, and frequency sufficient to yield data which are representative of the monitored activity including, when appropriate, continuous monitoring;

(c) Applicable reporting requirements based upon the impact of the regulated activity and as specified in Parts 264, 266 and 267. Reporting shall be no less frequent than specified in the above regulations.

270.32 Establishing permit conditions.

(a) In addition to conditions required in all permits (Section 270.30), the Director shall establish conditions, as required on a case-by-case basis, in permits under Sections 270.50 (duration of permits), 270.33(a) (schedules of compliance), 270.31 (monitoring), and for EPA issued permits only, 270.33(b) (alternate schedules of compliance) and 270.3 (considerations under Federal law).

(b) (1) Each RCRA permit shall include permit conditions necessary to achieve compliance with the Act and regulations, including each of the applicable requirements specified in Parts 264 and 266 through and 268 of this chapter. In satisfying this provision, the Administrator may incorporate applicable requirements of Parts 264 and 266 through 268 of this chapter directly into the permit or establish other permit conditions that are based on these parts.

(2) Each permit issued under section 3005 of this act shall contain terms and conditions as the Administrator or State Director determines necessary to protect human health and the environment.

(c) For a State issued permit, an applicable requirement is a State statutory or regulatory requirement which takes effect prior to final administrative disposition of a permit. For a permit issued by EPA, an applicable requirement is a statutory or regulatory requirement (including any interim final regulation) which takes effect prior to the issuance of the permit (except as provided in Section 124.86(c) for RCRA permits being processed under Subparts E or F of Part 124). Section 124.14 (reopening of comment period) provides a means for reopening EPA permit proceedings at the discretion of the Director where new requirements become effective during the permitting process and are of sufficient magnitude to make additional proceedings desirable. For State and EPA administered programs, an applicable requirement is also any requirement which takes effect prior to the modification or revocation and reissuance of a permit, to the extent allowed in Section 270.41.

(d) New or reissued permits, and to the extent allowed under Section 270.41, modified or revoked and reissued permits, shall incorporate each of the applicable requirements referenced in this section and in 40 CFR Section 270.31.

(e) *Incorporation.* All permit conditions shall be incorporated either expressly or by reference. If incorporated by reference, a specific citation to the applicable regulations or requirements must be given in the permit.

270.33 Schedules of compliance.

(a) The permit may, when appropriate, specify a schedule of compliance leading to compliance with the Act and regulations.
  (1) *Time for compliance.* Any schedules of compliance under this section shall require compliance as soon as possible.
  (2) *Interim dates.* Except as provided in paragraph (b)(1)(ii) of this section, if a permit establishes a schedule of compliance which exceeds 1 year from the date of permit issuance, the schedule shall set forth interim requirements and the dates for their achievement.
    (i) The time between interim dates shall not exceed 1 year.
    (ii) If the time necessary for completion of any interim requirement is more than 1 year and is not readily divisible into stages for completion, the permit shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.
  (3) *Reporting.* The permit shall be written to require that no later than 14 days following each interim date and the final date of compliance, the permittee shall notify the Director in writing, of its compliance or noncompliance with the interim or final requirements.

(b) *Alternative schedules of compliance.* An RCRA permit applicant or permittee may cease conducting regulated activities (by receiving a terminal volume of hazardous waste and, for treatment and storage HWM facilities, closing pursuant to applicable requirements; and, for disposal HWM facilities, closing and conducting post-closure care pursuant to applicable requirements) rather than continue to operate and meet permit requirements as follows:
  (1) If the permittee decides to cease conducting regulated activities at a given time within the term of a permit which has already been issued:
    (i) The permit may be modified to contain a new or additional schedule leading to timely cessation of activities; or
    (ii) The permittee shall cease conducting permitted activities before noncompliance with any interim or final compliance schedule requirement already specified in the permit.
  (2) If the decision to cease conducting regulated activities is made before issuance of a permit whose term will include the termination date, the permit shall contain a schedule leading to termination which will ensure timely compliance with applicable requirements.
  (3) If the permittee is undecided whether to cease conducting regulated activities, the Director may issue or modify a permit to contain two schedules as follows:
    (i) Both schedules shall contain an identical interim deadline requiring a final decision on whether to cease conducting regulated activities no later than a date which ensures sufficient time to comply with applicable requirements in a timely manner if the decision is to continue conducting regulated activities;
    (ii) One schedule shall lead to timely compliance with applicable requirements;
    (iii) The second schedule shall lead to cessation of regulated activities by a date which will ensure timely compliance with applicable requirements;
    (iv) Each permit containing two schedules shall include a requirement that after the permittee has made a final decision under paragraph (b)(3)(i) of this section it shall follow the schedule leading to compliance if the decision is to continue conducting regulated activities, and follow the schedule leading to termination if the decision is to cease conducting regulated activities.
  (4) The applicant's or permittee's decision to cease conducting regulated activities shall be evidenced by a firm public commitment satisfactory to the Director, such as resolution of the board of directors of a corporation.

270.34-270.39 [Reserved]

(g) 40 CFR 270.40 through 270.43 (Subpart D), "Changes to Permit", have been incorporated by reference including subsequent amendments and editions.

SUBPART D -- CHANGES TO PERMIT

270.40 Transfer of Permits.

(a) A permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued (under Section 270.40(b) or 270.41(b)(2) to identify the new permittee and incorporate such other requirements as may be necessary under the appropriate Act.

(b) Changes in the ownership or operational control of a facility may be made as a Class 1 modification with prior written approval of the Director in accordance with Section 270.42. The new owner or operator must submit a revised permit application no later than 90 days prior to the scheduled change. A written agreement containing a specific date for transfer of permit responsibility between the current and new permittees must also be submitted to the Director. When a transfer of ownership or operational control occurs, the old owner or operator shall comply with the requirements of 40 CFR Part 264. Subpart H (Financial Requirements) until the new owner or operator has demonstrated that he or she is complying with the requirements of that Subpart. The new owner or operator must demonstrate compliance with Subpart H requirements within six months of the date of the change of ownership or operational control of the facility. Upon demonstration to the Director by the new owner or operator of compliance with Subpart H, the Director shall notify the old owner or operator that he or she no longer needs to comply with Subpart H as of the date of demonstration.

270.41 Major Modification or revocation and reissuance of permits.

When the Director receives any information (for example, inspects the facility, receives information submitted by the permittee as required in the permit (see Section 270.30), receives a request for revocation and reissuance under Section 124.5, or conducts a review of the permit file) he or she may determine whether one or more of the causes listed in paragraphs (a) and (b) of this section for modification, or revocation and reissuance or both exist. If cause exists, the Director may modify or revoke and reissue the permit accordingly, subject to the limitations of paragraphs (c) of this section, and may request an updated application if necessary. When a permit is modified, only the conditions subject to modification are reopened. If a permit is revoked and reissued, the entire permit is reopened and subject to revision and the permit is reissued for a new term. [See 40 CFR Section 124.5(c)(2).] If cause does not exist under this section, the Director shall not modify or revoke and reissue the permit, except on request of the permittee. If a permit modification is requested by the permittee, the Director shall approve or deny the request according to the procedures of 40 CFR 270.42. Otherwise, a draft permit must be prepared and other procedures in Part 124 (or procedures of an authorized State program) followed.

(a) *Causes for modification.* The following are causes for modification, but not revocation and reissuance, of permits, the following may be causes for revocation and reissuance, as well as modification, when the permittee requests or agrees.

(1) *Alterations.* There are material and substantial alterations or additions to the permitted facility or activity which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.

(2) *Information.* The Director has received information. Permits may be modified during their terms for this cause only if the information was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and would have justified the application of different permit conditions at the time of issuance.

(3) *New Statutory requirements or regulations.* The standards or regulations on which the permit was based have been changed by statute, through promulgation of new or amended standards or regulations, or by judicial decision after the permit was issued.

(i) Director may modify the permit when the standards or regulations on which the permit was based have been changed by statute or amended standards or regulations.

(A) The permit condition requested to be modified was based on a promulgated Parts 260-266 regulation; and

(B) EPA has revised, withdrawn, or modified that portion of the regulation on which the permit condition was based; and

(C) A permittee requests modification in accordance with Section 124.5 within ninety (90) days after FEDERAL REGISTER notice of the action on which the request is based.

(ii) Permittee may request modification when:

(A) The permit condition to be modified was based on a promulgated regulation under Parts 124 of this chapter, Parts 260-268 of this chapter, or Part 270 of this chapter; and

(B) EPA has revised, withdrawn, or modified that portion of the regulation on which the permit condition was based; or

(C) A permittee requests modification in accordance with Section 124.5 of this chapter within 90 days after Federal Register notice of the action on which the request is based.

(iii) For judicial decisions, a court of competent jurisdiction has remanded and stayed EPA-promulgated regulations if the remand and stay concern that portion of the regulations on which the permit condition was based or if a request is filed by the permittee in accordance with Section 124.5 of this chapter within 90 days of judicial remand.

(4) *Compliance schedules.* The Director determines good cause exists for modification of a compliance schedule, such as an act of God, strike, flood, or materials shortage or other events over which the permittee has little or no control and for which there is no reasonably available remedy.

(5) Notwithstanding any other provision in this section, when a permit for a land disposal facility is reviewed by the Director under section 270.50(d), the Director shall modify the permit as necessary to assure that the facility continues to comply with the currently applicable requirements in Parts 124, 260-266, and 270.

(b) *Causes for modification or revocation and reissuance.* The following are causes to modify, or alternatively, revoke and reissue a permit:

(1) Cause exists for termination under Section 270.43, and the Director determines that modification or revocation and reissuance is appropriate.

(2) The Director has received notification (as required in the permit, see Section 270.30(1)(3)) of a proposed transfer of the permit.

(c) *Facility siting.* Suitability of the facility location will not be considered at the time of permit modification or revocation and reissuance unless new information or standards indicate that a threat to human health or the environmental exists which was unknown at the time of permit issuance.

270.42 Permit modification at the request of the permittee.

(a) *Class 1 modifications.*

(1) Except as provided in paragraph (a)(2) of this section, the permittee may put into effect Class 1 modifications listed in Appendix I of this section under the following conditions:

(i) The permittee must notify the Director concerning the modification by certified mail or other means that establish proof of delivery within 7 calendar days after the change is put into effect. This notice must specify the changes being made to permit conditions or supporting documents referenced by the permit and must explain why they are necessary. Along with the notice, the permittee must provide the applicable information required by Sections 270.13 through 270.21, 270.62, and 270.63.

(ii) The permittee must send a notice of the modification to all persons on the facility mailing list, maintained by the Director in accordance with 40 CFR 124.10(c)(viii), and the appropriate units of State and local government, as specified in 40 CFR 124.10(c)(ix). This notification must be made within 90 calendar days after the change is put into effect. For the Class I modifications that require prior Director approval, the notification must be made within 90 calendar days after the Director approves the request.

(iii) Any person may request the Director to review, and the Director may for cause reject, any Class 1 modification. The Director must inform the permittee by certified mail that Class 1 modification has been rejected, explaining the reasons for the rejection. If a Class 1 modification has been rejected, the permittee must comply with the original permit conditions.

(2) Class 1 permit modifications identified in Appendix I by an asterisk may be made only with the prior written approval of the Director.

(3) For a Class 1 permit modification, the permittee may elect to follow the procedures in Section 270.42(b) for Class 2 modifications instead of the Class 1 procedures. The permittee must inform the Director of this decision in the notice required in Section 270.42(b)(1).

(b) *Class 2 modifications.*

(1) For Class 2 modifications, listed in Appendix I of this section, the permittee must submit a modification request to the Director that:

(i) Describes that exact change to be made to the permit conditions and supporting documents referenced by the permit;

(ii) Identifies that the modification is a Class 2 modification:

(iii) Explains why the modification is needed; and

(iv) Provides the applicable information required by Sections 270.13 through 270.21, 270.62, and 270.63.

(2) The permittee must send a notice of the modification request to all persons on the facility mailing list maintained by the Director and to the appropriate units of State and local government as specified in 40 CFR 124.10(c)(ix) and must publish this notice in a major local newspaper of general circulation. This notice must be mailed and published within 7 days before or after the date of submission of the modification request, and the permittee must provide to the Director evidence of the mailing and publication. The notice must include:

(i) Announcement of a 60-day comment period, in accordance with Section 270.42(b)(5), and the name and address of an Agency contact to whom comments must be sent;

(ii) Announcement of the date, time, and place for a public meeting held in accordance with Section 270.42(b)(4);

(iii) Name and telephone number of the permittee's contact person;

(iv) Name and telephone number of an Agency contact person;

(v) Location where copies of the modification request and any supporting documents can be viewed and copied; and

(vi) The following statement: "The permittee's compliance history during the life of the permit being modified is available from the Agency contact person."

(3) The permittee must place a copy of the permit modification request and supporting documents in a location accessible to the public in the vicinity of the permitted facility.

(4) The permittee must hold a public meeting no earlier than 15 days after the publication of the notice required in paragraph (b)(2) of this section and no later that 15 days before the close of the 60-day comment period. The meeting must be held to the extent practicable in the vicinity of the permitted facility.

(5) The public shall be provided 60 days to comment on the modification request. The comment period will begin on the date the permittee publishes the notice in the local newspaper.
Comments should be submitted to the Agency contact identified in the public notice.

(6) (i) No later than 90 days after receipt of the notification request, the Director must:

(A) Approve the modification request, with or without changes, and modify the permit accordingly;

(B) Deny the request;

(C) Determine that the modification request must follow the procedures in Section 270.42(c) for Class 3 modifications for the following reasons:

(1) There is significant public concern about the proposed modification; or

(2) The complex nature of the change requires the more extensive procedures of Class 3.

(D) Approve the request, with or without changes, as a temporary authorization having a term of up to 180 days, or

(E) Notify the permittee that he or she will decide on the request within the next 30 days.

(ii) If the Director notifies the permittee of a 30-day extension for a decision, the Director must, no later than 120 days after receipt of the modification request:

(A) Approve the modification request, with or without changes, and modify the permit accordingly;

(B) Deny the request; or

(C) Determine that the modification request must follow the procedures in Section 270.42(c) for Class 3 modifications for the following reasons:

(1) There is significant public concern about the proposed modification; or

(2) The complex nature of the change requires the more extensive procedures of Class 3.

(D) Approve the request, with or without changes, as a temporary authorization having a term of up to 180 days.

(iii) If the Director fails to make one of the decisions specified in paragraph (b)(6)(ii) of this section by the 120th day after receipt of the modification request, the permittee is automatically authorized to conduct the activities described in the modification request for up to 180 days, without formal

Agency action. The authorized activities must be conducted as described in the permit modification request and must be in compliance with all appropriate standards of 40 CFR Part 265. If the Director approves, with or without changes, or denies the modification request during the term of the temporary or automatic authorization provided for in paragraphs (b)(6) (i), (ii), or (iii) of this section, such action cancels the temporary or automatic authorization.

(iv) (A) In the case of an automatic authorization under paragraph (b)(6)(iii) of this section, or a temporary authorization under paragraph (b)(6) (i)(D) or (ii)(D) of this section, if the Director has not made a final approval or denial of the modification request by the date 50 days prior to the end of the temporary or automatic authorization, the permittee must within seven days of that time send a notification to persons on the facility mailing list, and make a reasonable effort to notify other persons who submitted written comments on the modification request, that:

(1) The permittee has been authorized temporarily to conduct the activities described in the permit modification request, and

(2) Unless the Director acts to give final approval or denial of the request by the end of the authorization period, the permittee will receive authorization to conduct such activities for the life of the permit.

(B) If the owner/operator fails to notify the public by the date specified in paragraph (b)(6)(iv)(A) of this section, the effective date of the permanent authorization will be deferred until 50 days after the owner/operator notifies the public.

(v) Except as provided in paragraph (b)(6)(vii) of this section, if the Director does not finally approve or deny a modification request before the end of the automatic or temporary authorization period or reclassify the modification as a Class 3, the permittee is authorized to conduct the activities described in the permit modification request for the life of the permit unless modified later under Section 270.41 or Section 270.42. The activities authorized under this paragraph must be conducted as described in the permit modification request and must be in compliance with all appropriate standards of 40 CFR Part 265.

(vi) In making a decision to approve or deny a modification request, including a decision to issue a temporary authorization or to reclassify a modification as a Class 3, the Director must consider all written comments submitted to the Agency during the public comment period and must respond in writing to all significant comments in his or her decision.

(vii) With the written consent of the permittee, the Director may extend indefinitely or for a specified period the time periods for final approval or denial of a modification request or for reclassifying a modification as a Class 3.

(7) The Director may deny or change the terms of a Class 2 permit modification request under paragraphs (b)(6)(i) through (iii) of this section for the following reasons:

(i) The modification request is incomplete;

(ii) The requested modification does not comply with the appropriate requirements of 40 CFR Part 264 or other applicable requirements; or

(iii) The conditions of the modification fail to protect human health and the environment.

(8) The permittee may perform any construction associated with a Class 2 permit modification request beginning 60 days after the submission of the request unless the Director establishes a later date for commencing construction and informs the permittee in writing before day 60.

(c) *Class 3 modifications.*

(1) For Class 3 modifications listed in Appendix I of this section, the permittee must submit a modification request to the Director that:

(i) Describes the exact change to be made to the permit conditions and supporting documents referenced by the permit;

(ii) Identifies that the modification is a Class 3 modification;

(iii) Explains why the modification is needed; and

(iv) Provides the applicable information required by 40 CFR 270.13 through 270.22, 270.62, 270.63, and 270.66.

(2) The permittee must send a notice of the modification request to all persons on the facility mailing list maintained by the Director and to the appropriate units of State and local government as specified in 40 CFR 124.10(c)(ix) and must publish this notice in a major local newspaper of general circulation. This notice must be mailed and published within seven days before or after the date of submission of the modification request, and the permittee must provide to the Director evidence of the mailing and publication. The notice must include:

(i) Announcement of a 60-day comment period, and a name and address of an Agency contact to whom comments must be sent;
(ii) Announcement of the date, time, and place for a public meeting on the modification request, in accordance with Section 270.42(c)(4);
(iii) Name and telephone number of the permittee's contact person;
(iv) Name and telephone number of an Agency contact person;
(v) Location where copies of the modification request and any supporting documents can be viewed and copied; and
(vi) The following statement: "The permittee's compliance history during the life of the permit being modified is available from the Agency contact person."

(3) The permittee must place a copy of the permit modification request and supporting documents in a location accessible to the public in the vacinity of the permitted facility.

(4) The permittee must hold a public meeting no earlier than 15 days after the publication of the notice required in paragraph (c)(2) of this section and no later than 15 days before the close of the 60-day comment period. The meeting must be held to the extent practicable in the vicinity of the permitted facility.

(5) The public shall be provided at least 60 days to comment on the modification request. The comment period will begin on the date the permittee publishes the notice in the local newspaper. Comments should be submitted to the Agency contact identified in the notice.

(6) After the conclusion of the 60-day comment period, the Director must grant or deny the permit modification request according to the permit modification procedures of 40 CFR Part 124. In addition, the Director must consider and respond to all significant written comments received during the 60-day comment period.

(d) *Other modifications.*

(1) In the case of modifications not explicitly listed in Appendix I of this section, the permittee may submit a Class 3 modification request to the Agency, or he or she may request a determination by the Director that the modification should be reviewed and approved as a Class 1 or Class 2 modification. If the permittee requests that the modification be classified as a Class 1 or 2 modification, he or she must provide the Agency with the necessary information to support the requested classification.

(2) The Director shall make the determination described in paragraph (d)(1) of this section as promptly as practicable. In determining the appropriate class for a specific modification, the Director shall consider the similarity of the modification to other modifications codified in Appendix I and the following criteria:

(i) Class 1 modifications apply to minor changes that keep the permit current with routine changes to the facility or its operation. These changes do not substantially alter the permit conditions or reduce the capacity of the facility to protect human health or the environment. In the case of Class 1 modifications, the Director may require prior approval.

(ii) Class 2 modifications apply to changes that are necessary to enable a permittee to respond, in a timely manner, to,

(A) Common variations in the types and quantities of the wastes managed under the facility permit,

(B) Technological advancements, and

(C) Changes necessary to comply with new regulations, where these changes can be implemented without substantially changing design specifications or management practices in the permit.

(iii) Class 3 modifications substantially alter the facility or its operation.

(e) *Temporary authorizations.*

(1) Upon request of the permittee, the Director may, without prior public notice and comment, grant the permittee a temporary authorization in accordance with this subsection. Temporary authorizations must have a term of not more than 180 days.

(2) (i) The permittee may request a temporary authorization for:

(A) Any Class 2 modification meeting the criteria in paragraph (e)(3)(ii) of this section, and

(B) Any Class 3 modification that meets the criteria in paragraph (3)(ii) (A) or (B) of this section; or that meets the criteria in paragraphs (3)(ii)(C) through (E) of this section and provides improved management or treatment of a hazardous waste already listed in the facility permit.

(ii) The temporary authorization request must include:

(A) A description of the activities to be conducted under the temporary authorization;

(B) An explanation of why the temporary authorization is necessary; and

(C) Sufficient information to ensure compliance with 40 CFR Part 264 standards.

(iii) The permittee must send a notice about the temporary authorization request to all persons on the facility mailing list maintained by the Director and to appropriate units of State and local governments as specified in 40 CFR 124.10(c)(1)(ix). This notification must be made within seven days of submission of the authorization request.

(3) The Director shall approve or deny the temporary authorization as quickly as practical. To issue a temporary authorization, the Director must find:

(i) The authorized activities are in compliance with the standards of 40 CFR Part 264.

(ii) The temporary authorization is necessary to achieve one of the following objectives before action is likely to be taken on a modification request:

(A) To facilitate timely implementation of closure or corrective action activities:

(B) To allow treatment or storage in tanks or containers, or in containment buildings in accordance with 40 CFR Part 268;

(C) To prevent disruption of ongoing waste management activities:

(D) To enable the permittee to respond to sudden changes in the types or quantities of the wastes managed under the facility permit: or

(E) To facilitate other changes to protect human health and the environment.

(4) A temporary authorization may be reissued for one additional term of up to 180 days provided that the permittee has requested a Class 2 or 3 permit modification for the activity covered in the temporary authorization, and:

(i) The reissued temporary authorization constitutes the Director's decision on a Class 2 permit modification in accordance with paragraph (b)(6)(i)(D) or (ii)(D) of this section, or

(ii) The Director determines that the reissued temporary authorization involving a Class 3 permit modification request is warranted to allow the authorized activities to continue while the modification procedures of paragraph (c) of this section are conducted.

(f) *Public notice and appeals of permit modification decisions.*

(1) The Director shall notify persons on the facility mailing list and appropriate units of State and local government within 10 days of any decision under this section to grant or deny a Class 2 or 3 permit modification request. The Director shall also notify such persons within 10 days after an automatic authorization for a Class 2 modification goes into effect under Section 270.42(b)(6) (iii) or (v).

(2) The Director's decision to grant or deny a Class 2 or 3 permit modification request under this section may be appealed under the permit appeal procedures of 40 CFR 124.19.

(3) An automatic authorization that goes into effect under Section 270.42(b)(6) (iii) or (v) may be appealed under the permit appeal procedures of 40 CFR 124.19; however, the permittee may continue to conduct the activities pursuant to the automatic authorization until the appeal has been granted pursuant to Section 124.19(c), notwithstanding the provisions of Section 124.15(b).

(g) *Newly regulated wastes and units.*

(1) The permittee is authorized to continue to manage wastes listed or identified as hazardous under 40 CFR Part 261 of this chapter, or to continue to manage hazardous waste in units newly regulated as hazardous waste management units, if:

(i) The unit was in existence as a hazardous waste facility with respect to the newly listed or characterized waste or newly regulated waste management unit on the effective date of the final rule listing or identifying the waste, or regulating the unit;

(ii) The permittee submits a Class 1 modification request on or before the date on which the waste or unit becomes subject to the new requirements;

(iii) The permittee is in compliance with the applicable standards of 40 CFR Part 265 and 266 of this chapter:

(iv) The permittee also submits a complete Class 2 or 3 modification request within 180 days of the effective date of the rule listing or identifying the waste, or subjecting the unit to RCRA Subtitle C management standards;

(v) In the case of land disposal units, the permittee certifies that each such unit is in compliance with all applicable requirements of part 265 of this chapter for groundwater monitoring and financial responsibility on the date 12 months after the effective date of the rule identifying or listing the waste as hazardous, or regulating the unit as a hazardous waste management unit. If the owner or operator fails to clarify compliance with these requirements, he or she will lose authority to operate under this section.

(2) New wastes or units added to a facility's permit under this subsection do not constitute expansions for the purpose of the 25 percent capacity expansion limit for Class 2 modifications.

(h) *Military hazardous waste munitions treatment and disposal.* The permittee is authorized to continue to accept waste military munitions notwithstanding any permit conditions barring the permittee from accepting off-site wastes, if:

(1) The facility was in existence as a hazardous waste facility, and the facility was already permitted to handle the waste military munitions, on the date when the waste military munitions became subject to hazardous waste regulatory requirements;

(2) On or before the date when the waste military munitions become subject to hazardous waste regulatory requirements, the permittee submits a Class 1 modification request to remove or amend the permit provision restricting the receipt of off-site waste munitions; and

(3) The permittee submits a complete Class 2 modification request within 180 days of the date when the waste military munitions became subject to hazardous waste regulatory requirements.

(i) *Permit modification list.*

The Director must maintain a list of all approved permit modifications and must publish a notice once a year in a State-wide newspaper that an updated list is available for review.

Modifications	Class
A. General Permit Provisions	
1. Administrative and informational changes	1
2. Correction of typographical errors	1
3. Equipment replacement or upgrading with functionally equivalent components (e.g. pipes, valves, pumps, conveyors, controls)	1
4. Changes in the frequency of or procedures for monitoring, reporting, sampling, or maintenance activities by the permittee	
a. To provide for more frequent monitoring, reporting, sampling or maintenance	1
b. Other changes	2
5. Schedule of compliance:	
a. Changes in interim compliance dates, with prior approval of the Director	[1]1
b. Extension of final compliance date	3
6. Changes in expiration date of permit to allow earlier permit termination, with prior approval of the Director	[1]1
7. Changes in ownership or operational control of a facility, provided the procedures of Section 270.40(b) are followed	[1]1
B. General Facility Standards	
1. Changes to waste sampling or analysis methods	
a. To conform with agency guidance or regulations	1
b. To incorporate changes associated with F039 (multi-source leachate) sampling or analysis methods	1
c. To incorporate changes associated with underlying hazardous constituents in ignitable or corrosive wastes	2
2. Changes to analytical quality assurance/control plan	
a. To conform with agency guidance or regulations	1
b. Other changes	2
3. Changes in procedures for maintaining the operating record	1
4. Changes in frequency or content of inspection schedules	2
5. Changes in the training plan:	
a. That affect the type or decrease the amount of training given to employees	2
b. Other changes	1
6. Contingency plan:	
a. Changes in emergency procedures (i.e. spill or release response procedures)	2
b. Replacement with functionally equivalent equipment, upgrade, or relocate emergency equipment listed	1
c. Removal of equipment from emergency equipment list	2
d. Changes in name, address, or phone number of coordinators or other persons or agencies identified in the plan	1
7. Construction quality assurance plan	
a. Changes that the CQA officer certifies in the operating record will provide equivalent or better certainty that the unit components meet the design specifications	1
b. Other changes	2

Note: When a permit modification (such as introduction of a new unit) requires a change in facility plans or other general facility standards, that change shall be reviewed under the same procedures as the permit modification.

[1]Class 1 modifications requiring prior Agency approval.

Modifications	Class
C. Ground-water Protection	
1. Changes to wells:	
a. Changes in the number, location, depth, or design of upgradient or downgradient wells of permitted ground-water monitoring system	2
b. Replacement of an existing well that has been damaged or rendered inoperable, without change to location, design, or depth of the well	1
2. Changes in ground-water sampling or analysis procedures or monitoring schedule, with prior approval of the Director	1[1]
3. Changes in statistical procedure for determining whether a statistically significant change in ground-water quality between upgradient and downgradient wells has occurred, with prior approval of the Director	1[1]
4. Changes in point of compliance	1[2]
5. Changes in indicator parameters, hazardous constituents, or concentration limits (including ACLs):	
a. As specified in the ground-water protection standard	3
b. As specified in the detection monitoring program	2
6. Changes to a detection monitoring program as required by Section 264.98(j), unless otherwise specified in this appendix	2
7. Compliance monitoring program:	
a. Addition of compliance monitoring program as required by Sections 264.98(h)(4) and 264.99	3
b. Changes to a compliance monitoring program as required by Section 264.99(k), unless otherwise specified in this appendix	2
8. Corrective action program:	
a. Addition of a corrective action program as required by Sections 264.99(i)(2) and 264.100	3
b. Changes to a corrective action program as required by Section 264.100(h), unless otherwise specified in this Append	2
D. Closure	
1. Changes to the closure plan:	
a. Changes in estimate of maximum extent of operations or maximum inventory of waste on-site at any time during the active life of the facility, with prior approval of the Director	1[1]
b. Changes in the closure schedule for any unit, changes in the final closure schedule for the facility, or extension of the closure period, with prior approval of the Director	1[1]
c. Changes in the expected year of final closure, where other permit conditions are not changed, with prior approval of the Director	1[1]
d. Changes in procedures for decontamination of facility equipment or structures, with prior approval of the Director	1[1]
e. Changes in approved closure plan resulting from unexpected events occurring during partial or final closure, unless otherwise specified in this appendix	2
f. Extension of the closure period to allow a landfill, surface impound- or land treatment unit to receive non-hazardous wastes after final receipt of hazardous wastes under Section 264.113(d) and (e)	2

Modifications	Class
2. Creation of a new landfill unit as part of closure	3
3. Addition of the following new units to be used temporarily for closure activities:	
a. Surface impoundments	3
b. Incinerators	3
c. Waste piles that do not comply with Section 264.250(c)	3
d. Waste piles that comply with Section 264.250(c)	2
e. Tanks or containers (other than specified below)	2
f. Tanks used for neutralization, dewatering, phase separation, or component separation, with prior approval of the Director	1[1]
E. **Post-Closure**	
1. Changes in name, address, or phone number of contact in post-closure plan	1
2. Extension of post-closure care period	2
3. Reduction in the post-closure care period	3
4. Changes to the expected year of final closure, where other permit conditions are not changes	1
5. Changes in post-closure plan necessitated by events occurring during the active life of the facility, including partial and final closure	2
F. **Containers**	
1. Modification or addition of container units:	
a. Resulting in greater than 25% increase in the facility's container storage capacity, except as provided in F(1)(c) and F(4)(a) below	3
b. Resulting in up to 25% increase in the facility's container storage capacity, except as provided in F(1)(c) and F(4)(a) below	2
c. Or treatment processes necessary to treat wastes that are restricted from land disposal to meet some or all of the applicable treatment standards or to treat wastes to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in Section 268.8(a)(2)(ii), with prior approval of the Director. This modification may also involve addition of new waste codes or narrative descriptions of wastes. It is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028)	1[1]
2.	
a. Modification of a container unit without increasing the capacity of the unit	2
b. Addition of a roof to a container unit without alteration of the containment system	1
3. Storage of different wastes in containers, except as provided in (F)(4) below:	
a. That require additional or different management practices from those authorized in the permit	3
b. That do not require additional or different management practices from those authorized in the permit	2

Note: See Section 270.42(g) for modification procedures to be used for the management of newly listed or identified wastes

Modifications	Class
4. Storage or treatment of different wastes in containers:	
a. That require addition of units or change in treatment process or management standards, provided that the wastes are restricted from disposal and are to be treated to meet some or all of the applicable treatment standards, or that are to be treated to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in Section 268.8(a)(2)(ii). This modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028)	1
b. That do not require the addition of units or change in the treatment process or management standards, and provided that the units have previously received wastes of the same type (e.g., incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026 027, and 028)	1[1]
G. **Tanks**	
1.	
a. Modification or addition of tank units resulting in greater than 25% increase in the facility's tank capacity, except as provided in G(1)(c), G(1)(d), and G(1)(e) below.	3
b. Modification or addition of tank units resulting in up to 25% increase in the facility's tank capacity, except as provided in G(1)(d) and G(1)(e) below.	2
c. Addition of a new tank that will operate for more than 90 days using any of the following physical or chemical treatment, technologies: neutralization, dewatering, phase separation or component separation	2
d. After prior approval of the Director, addition of a new tank that will operate for up to 90 days using any of the following physical or chemical treatment technologies: neutralization, dewatering, phase separation, or component separation.	1[1]
e. Modification or addition of tank units or treatment processes necessary to treat wastes that are restricted from land disposal to meet some or all of the applicable treatment standards or to treat wastes to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit contained in Section 268.8(a)(2)(ii), with prior approval of the Director. This modification may also involve addition of new waste codes it is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028).	1[1]
2. Modification of a tank unit or secondary containment system without increasing the capacity of the unit.	2
3. Replacement of a tank with a tank that meets the same design standards and has a capacity within +/- 10% of the replaced tank provided -The capacity difference is no more than 1500 gallons, -The facility's permitted tank capacity is not increased, and -The replacement tank meets the same conditions to the permit.	1
4. Modification of a tank management practice	2
5. Management of different wastes in tanks:	
a. That require additional or different management practices, tank design, different fire protection specifications, or significantly different tank treatment process from that authorized in the permit, except as provided in (G)(5)(c) below.	3

Modifications	Class
b. That do not require additional or different management practices, tank design, different fire protection specifications, or significantly different tank treatment process than authorized in the permit, except as provided in (G)(5)(d)	2
c. That require addition of units or change in treatment processes or management standards, provided that the wastes are restricted from land disposal and are to be treated to meet some or all of the applicable treatment standards or that are to be treated to satisfy (in whole or in part) the standard of "use of practically available technology that yields the greatest environmental benefit" contained in Section 268.8(a)(2)(ii). The modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028)	1[1]
d. That do not require the addition of units or a change in the treatment process or management standards, and provided that the units have previously received wastes of the same type (e.g. incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, 028)	1
Note: See Section 270.42(g) for modification procedures to be used for the management of newly listed or identified wastes.	
H. **Surface Impoundments**	
1. Modification or addition of surface impoundment units that result in increasing the facility's surface impoundment storage or treatment capacity	3
2. Replacement of a surface impoundment unit.	3
3. Modification of a surface impoundment unit without increasing the facility's surface impoundment storage or treatment capacity and without modifying the unit's liner, leak detection system, or leachate collection system	2
4. Modification of a surface impoundment management practice.	2
5. Treatment, storage, or disposal of different wastes in surface impoundments:	
a. That require additional or different management practices or different design of the liner or leak detection system than authorized in the permit.	3
b. That do not require additional or different management practices or different design of the liner or leak detection system than authorized in the permit.	2
c. That are wastes restricted from land disposal that meet the applicable treatment standards or that are treated to satisfy the standard of "use of practically available technology that yields the greatest environmental benefit" contained in Section 269.8(a)(2)(ii), and provided that the unit meets the minimum technological requirements stated in Section 268.5(h)(2). This modification is not applicable to dioxin containing wastes (F020, 021, 022, 023, 026, 027, and 028).	1
d. That are residues from wastewater treatment or incineration, provided that disposal occurs in a unit that meets the minimum technological requirements stated in Section 268.5(h)(2) and provided further that the surface, impoundment has previously received wastes of the same type (for example, incinerator scrubber water). This modification is not applicable to dioxin containing wastes (F020, 021, 022, 023, 026, 027, and 028)	1

Modifications	Class

Note: See Section 270.42(g) for modification procedures to be used for the management of newly listed or identified wastes.

6. Modifications of unconstructed units to comply with Sections 264.221(c), 264.222, 264.223, and 264.226(d) *1
7. Changes in response action plan:
   (a) Increase in action leakage rate. 3
   (b) Change in a specific response reducing its frequency or effectiveness 3
   (c) Other changes. 2

I. **Enclosed Waste Piles.** For all waste piles except those complying with Section 264.250(c), modifications are treated the same as for a landfill. The following modifications are applicable only to waste piles complying with Section 264.250(c).

1. Modification or addition of waste pile units:
   a. Resulting in greater than 25% increase in the facility's waste pile storage or treatment capacity. 3
   b. Resulting in up to 25% increase in the facility's waste pile storage or treatment capacity. 2
2. Modification of waste pile unit without increasing the capacity of the unit 2
3. Replacement of a waste pile unit with another waste pile unit of the same design and capacity and meeting all waste pile conditions in the permit 1
4. Modification of a waste pile management practice 2
5. Storage or treatment of different wastes in waste piles:
   a. That require additional or different management practices or different design of the unit 3
   b. That do not require additional or different management practices or different design of the unit. 2
6. Conversion of an enclosed waste pile to a containment building unit. 2

Note: See Section 270.42(g) for modification procedures to be used for the management of newly listed or identified wastes.

J. **Landfills and Unenclosed Waste Piles**

1. Modification or addition of landfill units that result in increasing the facility's disposal capacity. 3
2. Replacement of a landfill 3
3. Addition or modification of a liner, leachate collection system, leachate detection system, run-off control, or final cover system 3
4. Modification of a landfill unit without changing a liner, leachate collection system, leachate detection system, run-off control, or final cover system. 2
5. Modification of a landfill management practice. 2
6. Landfill different wastes:
   a. That require additional or different management practices, different design of the liner, leachate collection system, or leachate detection system. 3
   b. That do not require additional or different management practices, different design of the liner, leachate collection system, or leachate detection system. 2

[1]Class 1 modifications requiring prior Agency approval.

Modifications	Class
c. That are wastes restricted from land disposal that meet the applicable treatment standards or that are treated to satisfy the standard of use of practically available technology that yields the greatest environmental benefit contained in Section 268.8(a)(2)(ii), and provided that the landfill unit meets the minimum technological requirements stated in Section 268.5(h)(2). This modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028)	1
Note: See Section 270.42(g) for modification procedures to be used for the management of newly listed or identified wastes.	
d. That are residues from wastewater treatment or incineration, provided that disposal occurs in a landfill unit that meets the minimum technological requirements stated in Section 268.5(h)(2), and provided further that the landfill has previously received wastes of the same type (for example, incinerator ash). This modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028)	1
7. Modifications of unconstructed units to comply with Sections 264.251(c), 264.252, 264.253, 264.254(c), 264.301(c), 264.302, 264.303(c), and 264.304	*1
8. Changes in response action plan:	
(a) Increase in action leakage rate	3
(b) Change in a specific response reducing its frequency or effectiveness	3
(c) Other changes	2
K. **Land Treatment**	
1. Lateral expansion of or other modification of a land treatment unit to increase areal extent	3
2. Modification of run-on control system	2
3. Modify run-off control system	3
4. Other modifications of land treatment unit component specifications or standards required in permit	2
5. Management of different wastes in land treatment units:	
a. That require a change in permit operating conditions or unit design specifications	3
b. That do not require a change in permit operating conditions or unit design specifications	2
Note: See Section 270.42(g) for modification procedures to be used for the management of newly listed or identified wastes.	
6. Modification of a land treatment unit management practice to:	
a. Increase rate or change method of waste application	3
b. Decrease rate of waste application	1
7. Modification of a land treatment unit management practice to change measures of pH or moisture content, or to enhance microbial or chemical reactions	2
8. Modification of a land treatment unit management practice to grow food chain crops, to add to or replace existing permitted crops with different food chain crops, or to modify operating plans for distribution of animal feeds resulting from such crops	3
9. Modification of operating practice due to detection of releases from the land treatment unit pursuant to Section 264.278(g)(2)	3

Modifications	Class
10. Changes in the unsaturated zone monitoring system, resulting in a change to the location, depth, number of sampling points, or replace unsaturated zone monitoring devices or components of devices with devices or components that have specifications different from permit requirements	3
11. Changes in the unsaturated zone monitoring system that do not result in a change to the location, depth, number of sampling points, or that replace unsaturated zone monitoring devices or components of devices with devices or components having specifications different from permit requirements	2
12. Changes in background values for hazardous constituents in soil and soil-pore liquid	2
13. Changes in sampling, analysis, or statistical procedure	2
14. Changes in land treatment demonstration program prior to or during the demonstration	2
15. Changes in any condition specified in the permit for a land treatment unit to reflect results of the land treatment demonstration, provided performance standards are met and the Director's prior approval has been received	1[1]
16. Changes to allow a second land treatment demonstration to be conducted when the results of the first demonstration have not shown the conditions under which the wastes can be treated completely, provided the conditions for the second demonstration are substantially the same as the conditions for the first demonstration and have received the prior approval of the Director	1[1]
17. Changes to allow a second land treatment demonstration to be conducted when the results of the first demonstration have not shown the conditions under which the wastes can be treated completely, where the conditions for the second demonstration are not substantially the same as the conditions for the first demonstration	3
18. Changes in vegetative cover requirements for closure	2
L. Incinerators, Boilers, and industrial Furnaces:	
1. Changes to increase by more than 25% any of the following limits authorized in the permit: A thermal feed rate limit, a feedstream feed rate limit, a chlorine/chloride feed rate limit, a metal feed rate limit, or an ash feed rate limit. The Director will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means	3
2. Changes to increase by up to 25% any of the following limits authorized in the permit: A thermal feed rate limit, a feedstream feed rate limit, chlorine/chloride feed rate limit, a metal feed rate limit, or an ash feed rate limit. The Director will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means	2
3. Modification of an incinerator, boiler, or industrial furnace unit by changing the internal size or geometry of the primary or secondary combustion units, by adding a primary or secondary combustion unit, by substantially changing the design of any component used to remove HCl/Cl_2, metals, or particulate from the combustion gases or by changing other features of the incinerator, boiler, or industrial furnace that could affect its capability to meet the regulatory performance standards. The	

Modifications	Class
Director will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means.	3
4. Modification of an incinerator, boiler, or industrial furnace unit in a manner that would not likely affect the capability of the unit to meet the regulatory performance standards but which would change the operating conditions or monitoring requirements specified in the permit. The Director may require a new trial burn to demonstrate compliance with the regulatory performance standards.	2
5. Operating requirements:	
a. Modification of the limits specified in the permit for minimum or maximum combustion gas temperature, minimum combustion gas residence time, oxygen concentration in the secondary combustion chamber, flue gas carbon monoxide and hydrocarbon concentration, maximum temperature at the inlet to the particulate matter emission control system, or operating parameters for the air pollution control system. The Director will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means	3
b. Modification of any stack gas emission limits specified in the permit, or modification of any conditions in the permit concerning emergency shutdown or automatic waste feed cutoff procedures or controls.	3
c. Modification of any other operating condition or any inspection or recordkeeping requirement specified in the permit.	2
Note: See Section 270.42(g) for modification procedures to be used for the management of newly listed or identified wastes.	
6. Burning different wastes	
a. If the waste contains a POHC that is more difficult to burn than authorized by the permit or if burning of the waste requires compliance with different regulatory performance standards than specified in the permit. The Director will require a new trial burn to substantiate compliance with the regulatory performance standards unless this demonstration can be made through other means	3
b. If the waste does not contain a POHC that is more difficult to burn than authorized by the permit and if burning of the waste does not require compliance with different regulatory performance standards than specified in the permit	2
7. Shakedown and trial burn:	
a. Modification of the trial burn plan or any of the permit conditions applicable during the shakedown period for determining operational readiness after construction, the trial burn period, or the period immediately following the trial burn.	2
b. Authorization of up to an additional 720 hours of waste burning during the shakedown period for determining operational readiness after construction, with the prior approval of the Director.	1_1
c. Changes in the operating requirements set in the permit for conducting a trial burn, provided the change is minor and has received the prior approval of the Director.	1_1

Modifications	Class
d. Changes in the ranges of the operating requirements set in the permit to reflect the results of the trial burn, provided the change is minor and has received the prior approval of the Director.	[1]1
8. Substitution of an alternative type of nonhazardous waste fuel that is not specified in the permit	1
M. Containment Buildings.	
1. Modification or addition of containment building units:	
a. Resulting in greater than 25% increase in the facility's containment building storage or treatment capacity	3
b. Resulting in up to 25% increase in the facility's containment building storage or treatment capacity	2
2. Modification of a containment building unit or secondary containment system without increasing the capacity of the unit	2
3. Replacement of a containment building with a containment building that meets the same design standards provided	
a. The unit capacity is not increased	1
b. The replacement containment building meets the same conditions in the permit.	1
4. Modification of a containment building management practice.	2
5. Storage or treatment of different wastes in containment buildings:	
a. That require additional or different management practices.	3
b. That do not require additional or different management practices.	2
N. Correction Action	
1. Approval of a corrective action management unit pursuant to Section 264.552	3
2. Approval of a temporary unit or time extension for a temporary unit pursuant to Section 264.553	2

[1]Class 1 modifications requiring prior Agency approval

270.43 Termination of permits.

(a) The following are causes for terminating a permit during its term, or for denying a permit renewal application;
  (1) Noncompliance by the permittee with any condition of the permit;
  (2) The permittee's failure in the application or during the permit issuance process to disclose fully all relevant facts, or the permittee's misrepresentation of any relevant facts at any time; or
  (3) A determination that the permitted activity endangers human health or the environment and can only be regulated to acceptable levels by permit modification or termination.

(b) The Director shall follow the applicable procedures in Part 124 or State procedures in terminating any permit under this section.

270.44-270.49 [Reserved.]

(h) 40 CFR 270.50 through 270.51 (Subpart E), "Expiration and Continuation of Permits", have been incorporated by reference including subsequent amendments and editions.

SUBPART E -- EXPIRATION AND CONTINUATION OF PERMITS

270.50 Duration of permits.

(a) RCRA permits shall be effective for a fixed term not to exceed 10 years.
(b) Except as provided in Section 270.51, the term of a permit shall not be extended by modification beyond the maximum duration specified in this section.
(c) The Director may issue any permit for a duration that is less than the full allowable term under this section.
(d) Each permit for a land disposal facility shall be reviewed by the Director five years after the date of permit issuance or reissuance and shall be modified as necessary, as provided in Section 270.41.

270.51 Continuation of expiring permits.

(a) *EPA permits.* When EPA is the permit-issuing authority, the conditions of an expired permit continue in force under 5 U.S.C. 558(c) until the effective date of a new permit (see Section 124.15) if:
  (1) The permittee has submitted a timely application under Section 270.14 and the applicable sections in Sections 270.15 - 270.29 which is a complete (under Section 270.10(c)) application for a new permit; and
  (2) The Regional Administrator through no fault of the permittee, does not issue a new permit with an effective date under Section 124.15 on or before the expiration date of the previous permit (for example, when issuance is impracticable due to time or resource constraints).
(b) *Effect.* Permits continued under this section remain fully effective and enforceable.
(c) Enforcement. When the permittee is not in compliance with the conditions of the expiring or expired permit, the Regional Administrator may choose to do any or all of the following:
  (1) Initiate enforcement action based upon the permit which has been continued;
  (2) Issue a notice of intent to deny the new permit under Section 124.6. If the permit is denied, the owner or operator would then be required to cease the activities authorized by the continued permit or be subject to enforcement action for operating without a permit;
  (3) Issue a new permit under Part 124 with appropriate conditions; or
  (4) Take other actions authorized by these regulations.
(d) *State continuation.* In a State with a hazardous waste program authorized under 40 CFR Part 271, if a permittee has submitted a timely and complete application under applicable State law and regulations, the terms and conditions of an EPA-issued RCRA permit continue in force beyond the expiration date of the permit, but only until the effective date of the State's issuance or denial of a State RCRA permit.

(i) 40 CFR 270.60 through 270.66 (Subpart F), "Special Forms of Permits", have been incorporated by reference including subsequent amendments and editions.

SUBPART F – SPECIAL FORMS OF PERMITS

270.52-270.59 [Reserved]

270.60 Permit by rule.

Notwithstanding any other provision of this part or Part 124, the following shall be deemed to have a RCRA permit if the conditions listed are met:

(a) *Ocean disposal barges or vessels.* The owner or operator of a barage or other vessel which accepts hazardous waste for ocean disposal, if the owner or operator:
  (1) Has a permit for ocean dumping issued under 40 CFR Part 220 (Ocean Dumping, authorized by the Marine Protection, Research, and Sanctuaries Act, as amended, 33 U.S.C. 1420 et seq.);
  (2) Complies with the conditions of that permit; and
  (3) Complies with the following hazardous waste regulations;
    (i) 40 CFR 264.11, Identification number;
    (ii) 40 CFR 264.71, Use of manifest system;
    (iii) 40 CFR 264.72, Manifest discrepancies;
    (iv) 40 CFR 264.73(a) and (b)(1), Operating record;
    (v) 40 CFR 264.75, Biennial report; and
    (vi) 40 CFR 264.76, Unmanifested waste report.

(b) *Injection wells.* The owner or operator of an injection well disposing of hazardous waste, if the owner or operator:
  (1) Has a permit for underground injection issued under Part 144 or 145; and
  (2) Complies with the conditions of that permit and the requirements of Section 144.14 (requirements for wells managing hazardous waste).
  (3) For UIC permits issued after November 8, 1984:
    (i) Complies with 40 CFR 264.101; and.
    (ii) Where the UIC well is the only unit at a facility which requires a RCRA permit, complies with 40 CFR 270.14(d).

(c) *Publicly owned treatment works.* The owner or operator of a POTW which accepts for treatment hazardous waste, if the owner or operator:
  (1) Has an NPDES permit;
  (2) Complies with the conditions of that permit; and
  (3) Complies with the following regulations:
    (i) 40 CFR 264.11, Identification number;
    (ii) 40 CFR 264.71, Use of manifest system;
    (iii) 40 CFR 264.72, Manifest discrepancies;
    (iv) 40 CFR 264.73(a) and (b)(1), Operating record;
    (v) 40 CFR 264.75, Biennial report;
    (vi) 40 CFR 264.76, Unmanifested waste report; and
    (vii) For NPDES permits issued after November 8, 1984, 40 CFR 264.101.
  (4) If the waste meets all Federal, State, and local pretreatment requirements which would be applicable to the waste if it were being discharged into the POTW through a sewer, pipe, or similar conveyance.

270.61 Emergency permits.

(a) Notwithstanding any other provision of this part of Part 124, in the event the Director finds an imminent and substantial endangerment to human health or the environment the Director may issue a temporary emergency permit:
  (1) To a non-permitted facility to allow treatment, storage, or disposal of hazardous waste; or
  (2) To a permitted facility to allow treatment, storage, or disposal of a hazardous waste not covered by an effective permit.

(b) This emergency permit:
  (1) May be oral or written. If oral, it shall be followed in five days by a written emergency permit;
  (2) Shall not exceed 90 days in duration;
  (3) Shall clearly specify the hazardous wastes to be received, and the manner and location of their treatment, storage, or disposal;
  (4) May be terminated by the Director at any time without process if he or she determines that termination is appropriate to protect human health and the environment;
  (5) Shall be accompanied by a public notice published under Section 124.11(b), including:
    (i) Name and address of the office granting the emergency authorization;
    (ii) Name and location of the permitted HWM facility;
    (iii) A brief description of the wastes involved;
    (iv) A brief description of the action authorized and reasons for authorizing it; and
    (v) Duration of the emergency permit; and
  (6) Shall incorporate, to the extent possible and not inconsistent with the emergency situation, all applicable requirements of this part and 40 CFR Parts 264 and 266.

270.62 Hazardous waste incinerator permits.

(a) For the purposes of determining operational readiness following completion of physical construction, the Director must establish permit conditions, including but not limited to allowable waste feeds and operating conditions, in the permit to a new hazardous waste incinerator. These permit conditions will be effective for the minimum time required to bring the incinerator to a point of operational readiness to conduct a trial burn, not to exceed 720 hours operating time for treatment of hazardous waste. The Director may extend the duration of this operational period once, for up to 720 additional hours, at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to Section 270.42 of this chapter.
  (1) Applicants must submit a statement, with part B of the permit application, which suggests the conditions necessary to operate in compliance with the performance standards of Section 264.343 of this chapter during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates and the operating parameters identified in Section 264.345 of this chapter.
  (2) The Director will review this statement and any other relevant information submitted with Part B of the permit application and specify requirements for this period sufficient to meet the performance standards of Section 264.343 of this chapter based on his engineering judgment.
(b) For the purposes of determining feasibility of compliance with the performance standards of Section 264.343 of this chapter and of determining adequate operating conditions under Section 264.345 of this chapter, the Director must establish conditions in the permit for a new hazardous waste incinerator to be effective during the trial burn.
  (1) Applicants must propose a trial burn plan, prepared under paragraph (b)(2) of this section with a Part B of the permit application.
  (2) The trial burn plan must include the following information:
    (i) An analysis of each waste or mixture of wastes to be burned which includes:
      (A) Heat value of the waste in the form and composition in which it will be burned.
      (B) Viscosity (if applicable), or description of the physical form of the waste.
      (C) An identification of any hazardous organic constituents listed in Part 261, Appendix VIII, of this chapter, which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in Part 261, Appendix VIII, of this chapter which would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified, and the basis for the exclusion stated. The waste analysis must rely on analytical techniques specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11 of this chapter and §270.6, or other equivalent.
      (D) An approximate quantification of the hazardous constituents identified in the waste, within the precision produced by the analytical methods specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11 of this chapter and §270.6, or their equivalent.
    (ii) A detailed engineering description of the incinerator for which the permit is sought including:
      (A) Manufacturer's name and model number of incinerator (if available).
      (B) Type of incinerator.
      (C) Linear dimensions of the incinerator unit including the cross sectional area of combustion chamber.
      (D) Description of the auxiliary fuel system (type/feed).

(E) Capacity of prime mover.
(F) Description of automatic waste feed cut-off system(s).
(G) Stack gas monitoring and pollution control equipment.
(H) Nozzle and burner design.
(I) Construction materials.
(J) Location and description of temperature, pressure, and flow indicating and control devices.

(iii) A detailed description of sampling and monitoring procedures, including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(iv) A detailed test schedule for each waste for which the trial burn is planned including date(s), duration, quantity of waste to be burned, and other factors relevant to the Director's decision under paragraph (b)(5) of this section.

(v) A detailed test protocol, including, for each waste identified, the ranges of temperature, waste feed rate, combustion gas velocity, use of auxiliary fuel, and any other relevant parameters that will be varied to affect the destruction and removal efficiency of the incinerator.

(vi) A description of, and planned operating conditions for, any emission control equipment which will be used.

(vii) Procedures for rapidly stopping waste feed, shutting down the incinerator, and controlling emissions in the event of an equipment malfunction.

(viii) Such other information as the Director reasonably finds necessary to determine whether to approve the trial burn plan in light of the purposes of this paragraph and the criteria in paragraph (b)(5) of this section.

(3) The Director, in reviewing the trial burn plan, shall evaluate the sufficiency of the information provided and may require the applicant to supplement this information, if necessary, to achieve the purposes of this paragraph.

(4) Based on the waste analysis data in the trial burn plan, the Director will specify as trial Principal Organic Hazardous Constituents (POHCs), those constituents for which destruction and removal efficiencies must be calculated during the trial burn. These trial POHCs will be specified by the Director based on his estimate of the difficulty of incineration of the constituents identified in the waste analysis, their concentration or mass in the waste feed, and, for wastes listed in Part 261, Subpart D, of this chapter, the hazardous waste organic constituent or constituents identified in Appendix VII of that part as the basis for listing.

(5) The Director shall approve a trial burn plan if he finds that:

(i) The trial burn is likely to determine whether the incinerator performance standard required by Section 264.343 of this chapter can be met;

(ii) The trial burn itself will not present an imminent hazard to human health or the environment;

(iii) The trial burn will help the Director to determine operating requirements to be specified under Section 264.345 of this chapter; and

(iv) The information sought in paragraphs (b)(5)(i) and (ii) of this section cannot reasonably be developed through other means.

(6) During each approved trial burn (or as soon after the burn as is practicable), the applicant must make the following determinations:

(i) A quantitative analysis of the trial POHCs in the waste feed to the incinerator.

(ii) A quantitative analysis of the exhaust gas for the concentration and mass emissions of the trial POHCs, oxygen (0_2) and hydrogen chloride (HCl).

(iii) A quantitative analysis of the scrubber water (if any), ash residues, and other residues, for the purpose of estimating the fate of the trial POHCs.

(iv) A computation of destruction and removal efficiency (DRE), in accordance with the DRE formula specified in Section 264.343(a) of this chapter.

(v) If the HCl emission rate exceeds 1.8 kilograms of HCl per hour (4 pounds per hour), a computation of HCl removal efficiency in accordance with Section 264.343(b) of this chapter.

(vi) A computation of particulate emissions, in accordance with Section 264.343(c) of this chapter.

(vii) An identification of sources of fugitive emissions and their means of control.

(viii) A measurement of average, maximum, and minimum temperatures and combustion gas velocity.

(ix) A continuous measurement of carbon monoxide (CO) in the exhaust gas.

(x) Such other information as the Director may specify as necessary to ensure that the trial burn will determine compliance with the performance standards in Section 264.343 of this chapter and to

establish the operating conditions required by Section 264.345 of this chapter as necessary to meet that performance standard.

(7) The applicant must submit to the Director a certification that the trial burn has been carried out in accordance with the approved trial burn plan, and must submit the results of all the determinations required in paragraph (b)(6). This submission shall be made within 90 days of completion of the trial burn, or later if approved by the Director.

(8) All data collected during any trial burn must be submitted to the Director following the completion of the trial burn.

(9) All submissions required by this paragraph must be certified on behalf of the applicant by the signature of a person authorized to sign a permit application or a report under Section 270.11.

(10) Based on the results of the trial burn, the Director shall set the operating requirements in the final permit according to Section 264.345 of this chapter. The permit modification shall proceed according to Section 270.42.

(c) For the purposes of allowing operation of a new hazardous waste incinerator following completion of the trial burn and prior to final modification of the permit conditions to reflect the trial burn results, the Director may establish permit conditions, including but not limited to allowable waste feeds and operating conditions sufficient to meet the requirements of Section 264.345 of this chapter, in the permit to a new hazardous waste incinerator. These permit conditions will be effective for the minimum time required to complete sample analysis, data computation and submission of the trial burn results by the applicant, and modification of the facility permit by the Director.

(1) Applicants must submit a statement, with Part B of the permit application, which identifies the conditions necessary to operate in compliance with the performance standards of Section 264.343 of this chapter during this period. This statement should include, at a minimum, restrictions on waste constituents, waste feed rates, and the operating parameters in Section 264.345 of this chapter.

(2) The Director will review this statement and any other relevant information submitted with Part B of the permit application and specify those requirements for this period most likely to meet the performance standards of Section 264.343 of this chapter based on his engineering judgment.

(d) For the purpose of determining feasibility of compliance with the performance standards of Section 264.343 of this chapter and of determining adequate operating conditions under Section 264.345 of this chapter, the applicant for a permit for an existing hazardous waste incinerator must prepare and submit a trial burn plan and perform a trial burn in accordance with Section 270.19(b) and paragraphs (b)(2) through (b)(9) of this section or, instead, submit other information as specified in Section 270.19(c). Applicants submitting information under Section 270.19(a) are exempt from compliance with Sections 264.343 and 264.345 and, therefore, are exempt from the requirement to conduct a trial burn. Applicants who submit trial burn plans and receive approval before submission of a permit application must complete the trial burn and submit the results, specified in paragraph (b)(6), with Part B of the permit application. If completion of this process conflicts with the date set for submission of the Part B application, the applicant must contact the Director to establish a later date for submission of the Part B application or the trial burn results. Trial burn results must be submitted prior to issuance of the permit. When the applicant submits a trial burn plan with Part B of the permit application, the Director will specify a time period prior to permit issuance in which the trial burn must be conducted and the results submitted.

270.63 Permits for land treatment demonstrations using field test or laboratory analyses.

(a) For the purpose of allowing an owner or operator to meet the treatment demonstration requirements of Section 264.272 of this chapter, the Director may issue a treatment demonstration permit. The permit must contain only those requirements necessary to meet the standards in Section 264.272(c). The permit may be issued either as a treatment or disposal permit covering only the field test or laboratory analyses, or as a two-phase facility permit covering the field tests, or laboratory analyses, and design, construction operation and maintenance of the land treatment unit.

(1) The Director may issue a two-phase facility permit if he finds that based on information submitted in Part B of the application, substantial, although incomplete or inconclusive information already exists upon which to base the issuance of a facility permit.

(2) If the Director finds that not enough information exists upon which he can establish permit conditions to attempt to provide for compliance with all of the requirements of Subpart M, he must issue a treatment demonstration permit covering only the field test or laboratory analyses.

(b) If the Director finds that a phased permit may be issued, he will establish, as requirements in the first phase of the facility permit, conditions for conducting the field tests or laboratory analyses. These permit conditions will include design and operating parameters (including the duration of the tests or analyses and, in the case of field

tests, the horizontal and vertical dimensions of the treatment zone), monitoring procedures, post-demonstration clean-up activities, and any other conditions which the Director finds may be necessary under Section 264.272(c). The Director will include conditions in the second phase of the facility permit to attempt to meet all Subpart M requirements pertaining to unit design, construction, operation, and maintenance. The Director will establish these conditions in the second phase of the permit based upon the substantial but incomplete or inconclusive information contained in the Part B application.

(1) The first phase of the permit will be effective as provided in Section 124.15(b) of this chapter.

(2) The second phase of the permit will be effective as provided in paragraph (d) of this section.

(c) When the owner or operator who has been issued a two-phase permit has completed the treatment demonstration, he must submit to the Director a certification, signed by a person authorized to sign a permit application or report under Section 270.11, that the field tests or laboratory analyses have been carried out in accordance with the conditions specified in phase one of the permit for conducting such tests or analyses. The owner or operator must also submit all data collected during the field tests or laboratory analyses within 90 days of completion of those tests or analyses unless the Director approves a later date.

(d) If the Director determines that the results of the field tests or laboratory analyses meet the requirements of Section 264.272 of this chapter, he will modify the second phase of the permit to incorporate any requirements necessary for operation of the facility in compliance with Part 264, Subpart M, of this chapter, based upon the results of the field tests or laboratory analyses.

(1) This permit modification may proceed under Section 270.42, or otherwise will proceed as a modification under Section 270.41(a)(2). If such modifications are necessary, the second phase of the permit will become effective only after those modifications have been made.

(2) If no modifications of the second phase of the permit are necessary, the Director will give notice of his final decision to the permit applicant and to each person who submitted written comments on the phased permit or who requested notice of the final decision on the second phase of the permit. The second phase of the permit then will become effective as specified in Section 124.15(b).

270.65 Research, development, and demonstration permits.

(a) The Administrator may issue a research, development, and demonstration permit for any hazardous waste treatment facility which proposes to utilize an innovative and experimental hazardous waste treatment technology or process for which permit standards for such experimental activity have not been promulgated under Part 264 or 266. Any such permit shall include such terms and conditions as will assure protection of human health and the environment. Such permits:

(1) Shall provide for the construction of such facilities as necessary, and for operation of the facility for not longer than one year unless renewed as provided in paragraph (d) of this section, and

(2) Shall provide for the receipt and treatment by the facility of only those types and quantities of hazardous waste which the Administrator deems necessary for purposes of determining the efficacy and performance capabilities of the technology or process and the effects of such technology or process on human health and the environment, and

(3) Shall include such requirements as the Administrator deems necessary to protect human health and the environment (including, but not limited to, requirements regarding monitoring, operation, financial responsibility, closure, and remedial action), and such requirements as the Administrator deems necessary regarding testing and providing of information to the Administrator with respect to the operation of the facility.

(b) For the purpose of expediting review and issuance of permits under this section, the Administrator may, consistent with the protection of human health and the environment, modify or waive permit application and permit issuance requirements in Parts 124 and 270 except that there may be no modification or waiver of regulations regarding financial responsibility (including insurance) or of procedures regarding public participation.

(c) The Administrator may order an immediate termination of all operations at the facility at any time he determines that termination is necessary to protect human health and the environment.

(d) Any permit issued under this section may be renewed not more than three times. Each such renewal shall be for a period of not more than 1 year.

270.66 Permits for boilers and industrial furnaces burning hazardous waste.

(a) General. Owners and operators of new boilers and industrial furnaces (those not operating under the interim status standards of Section 266.103 of this chapter) are subject to paragraphs (b) through (f) of this section.

Boilers and industrial furnaces operating under the interim status standards of Section 266.103 of this chapter are subject to paragraph (g) of this section.

(b) Permit operating periods for new boilers and industrial furnaces. A permit for a new boiler or industrial furnace shall specify appropriate conditions for the following operating periods:

(1) Pretrial burn period. For the period beginning with initial introduction of hazardous waste and ending with initiation of the trial burn, and only for the minimum time required to bring the boiler or industrial furnace to a point of operational readiness to conduct a trial burn, not to exceed 720 hours operating time when burning hazardous waste, the Director must establish in the Pretrial Burn Period of the permit conditions, including but not limited to, allowable hazardous waste feed rates and operating conditions. The Director may extend the duration of this operational period once, for up to 720 additional hours, at the request of the applicant when good cause is shown. The permit may be modified to reflect the extension according to Section 270.42.

(i) Applicants must submit a statement, with part B of the permit application, that suggests the conditions necessary to operate in compliance with the standards of Sections 266.104 through 266.107 of this chapter during this period. This statement should include, at a minimum, restrictions on the applicable operating requirements identified in Section 266.102(e) of this chapter.

(ii) The Director will review this statement and any other relevant information submitted with part B of the permit application and specify requirements for this period sufficient to meet the performance standards of Sections 266.104 through 266.107 of this chapter based on his/her engineering judgment.

(2) Trial burn period. For the duration of the trial burn, the Director must establish conditions in the permit for the purposes of determining feasibility of compliance with the performance standards of Sections 266.104 through 266.107 of this chapter and determining adequate operating conditions under Section 266.102(e) of this chapter. Applicants must propose a trial burn plan, prepared under paragraph (c) of this section, to be submitted with part B of the permit application.

(3) Post-trial burn period.

(i) For the period immediately following completion of the trial burn, and only for the minimum period sufficient to allow sample analysis, data computation, and submission of the trial burn results by the applicant, and review of the trial burn results and modification of the facility permit by the Director to reflect the trial burn results, the Director will establish the operating requirements most likely to ensure compliance with the performance standards of Sections 266.104 through 266.107 of this chapter based on the engineering judgment.

(ii) Applicants must submit a statement, with part B of the application, that identifies the conditions necessary to operate during this period in compliance with the performance standards of Sections 266.104 through 266.107 of this chapter. This statement should include, at a minimum, restrictions on the operating requirements provided by Section 266.102(e) of this chapter.

(iii) The Director will review this statement and any other relevant information submitted with part B of the permit application and specify requirements for this period sufficient to meet the performance standards of Sections 266.104 through 266.107 of this chapter based on his/her engineering judgment.

(4) Final permit period. For the final period of operation, the Director will develop operating requirements in conformance with Section 266.102(e) of this chapter that reflect conditions in the trial burn plan and are likely to ensure compliance with the performance standards of Sections 266.104 through 266.107 of this chapter. Based on the trial burn results, the Director shall make any necessary modifications to the operating requirements to ensure compliance with the performance standards. The permit modification shall proceed according to Section 270.42.

(c) Requirements for trial burn plans. The trial burn plan must include the following information. The Director, in reviewing the trial burn plan, shall evaluate the sufficiency of the information provided and may require the applicant to supplement this information, if necessary, to achieve the purposes of this paragraph:

(1) An analysis of each feed stream, including hazardous waste, other fuels, and industrial furnace feed stocks, as fired, that includes:

(i) Heating value, levels of antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, thallium, total chlorine/chloride, and ash;

(ii) Viscosity or description of the physical form of the feed stream;

(2) An analysis of each hazardous waste, as fired, including:

(i) An identification of any hazardous organic constituents listed in appendix VIII, part 261, of this chapter that are present in the feed stream, except that the applicant need not analyze for constituents listed in appendix VIII that would reasonably not be expected to be found in the hazardous waste. The constituents excluded from analysis must be identified and the basis for this

exclusion explained. The waste analysis must be conducted in accordance with analytical techniques specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11 of this chapter and §270.6, or their equivalent.

(ii) An approximate quantification of the hazardous constituents identified in the hazardous waste, within the precision produced by the analytical methods specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11 of this chapter and §270.6, or other equivalent.

(iii) A description of blending procedures, if applicable, prior to firing the hazardous waste, including a detailed analysis of the hazardous waste prior to blending, an analysis the material with which the hazardous waste is blended, and blending ratios.

(3) A detailed engineering description of the boiler or industrial furnace, including:

(i) Manufacturer's name and model number of the boiler or industrial furnace;

(ii) Type of boiler or industrial furnace;

(iii) Maximum design capacity in appropriate units;

(iv) Description of the feed system for the hazardous waste, and, as appropriate, other fuels and industrial furnace feedstocks;

(v) Capacity of hazardous waste feed system;

(vi) Description of automatic hazardous waste feed cutoff system(s);

(vii) Description of any air pollution control system; and

(viii) Description of stack gas monitoring and any pollution control monitoring systems.

(4) A detailed description of sampling and monitoring procedures including sampling and monitoring locations in the system, the equipment to be used, sampling and monitoring frequency, and planned analytical procedures for sample analysis.

(5) A detailed test schedule for each hazardous waste for which the trial burn is planned, including date(s), duration, quantity of hazardous waste to be burned, and other factors relevant to the Director's decision under paragraph (b)(2) of this section.

(6) A detailed test protocol, including, for each hazardous waste identified, the ranges of hazardous waste feed rate, and, as appropriate, the feed rates of other fuels and industrial furnace feedstocks, and any other relevant parameters that may affect the ability of the boiler or industrial furnace to meet the performance standards in Sections 266.104 through 266.107 of this chapter.

(7) A description of, and planned operating conditions for, any emission control equipment that will be used.

(8) Procedures for rapidly stopping the hazardous waste feed and controlling emissions in the event of an equipment malfunction.

(9) Such other information as the Director reasonably finds necessary to determine whether to approve the trial burn plan in light of the purposes of this paragraph and the criteria in paragraph (b)(2) of this section.

(d) Trial burn procedures.

(1) A trial burn must be conducted to demonstrate conformance with the standards of Sections 266.104 through 266.107 of this chapter under an approved trial burn plan.

(2) The Director shall approve a trial burn plan if he/she finds that:

(i) The trial burn is likely to determine whether the boiler or industrial furnace can meet the performance standards of Sections 266.104 through 266.107 of this chapter;

(ii) The trial burn itself will not present an imminent hazard to human health and the environment;

(iii) The trial burn will help the Director to determine operating requirements to be specified under Section 266,.102(e) of this chapter; and

(iv) The information sought in the trial burn cannot reasonably be developed through other means.

(3) The applicant must submit to the Director a certification that the trial burn has been carried out in accordance with the approved trial burn plan, and must submit the results of all the determinations required in paragraph (c) of this section. This submission shall be made within 90 days of completion of the trial burn, or later if approved by the Director.

(4) All data collected during any trial burn must be submitted to the Director following completion of the trial burn.

(5) All submissions required by this paragraph must be certified on behalf of the applicant by the signature of a person authorized to sign a permit application or a report under Section 270.11.

(e) Special procedures for DRE trial burns. When a DRE trial burn is required under Section 266.104(a) of this chapter, the Director will specify (based on the hazardous waste analysis data and other information in the trial burn plan) as trial Principal Organic Hazardous Constituents (POHCs) those compounds for which destruction and removal efficiencies must be calculated during the trial burn. These trial POHCs will be specified by the Director based on information including his/her estimate of the difficulty of destroying the constituents identified in the hazardous waste analysis, their concentrations or mass in the hazardous waste feed, and, for hazardous

waste containing or derived from wastes listed in part 261, subpart D of this chapter, the hazardous waste organic constituent(s) identified in Appendix VII of that part as the basis for listing.

(f) Determinations based on trial burn. During each approved trial burn (or as soon after the burn as is practicable), the applicant must make the following determinations:

(1) A quantitative analysis of the levels of antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, thallium, silver, and chlorine/chloride, in the feed streams (hazardous waste, other fuels, and industrial furnace feedstocks);

(2) When a DRE trial burn is required under Section 266.104(a) of this chapter:

(i) A quantitative analysis of the trial POHCs in the hazardous waste feed:

(ii) A quantitative analysis of the stack gas for the concentration and mass emissions of the trial $POHC_3$; and

(iii) A computation of destruction and removal efficiency (DRE), in accordance with the DRE formula specified in Section 266.104(a) of this chapter;

(3) When a trial burn for chlorinated dioxins and furans is required under Section 266.104(e) of this chapter, a quantitative analysis of the stack gas for the concentration and mass emission rate of the 2.3,7,8-chlorinated tetra-octa congeners of chlorinated dibenzo-p-dioxins and furans, and a computation showing conformance with the emission standard.

(4) When a trial burn for particulate matter, metals, or HCl/Cl_2 is required under Sections 266.105, 266.106(c) or (d), or 266.107(b)(2) or (c) of this chapter, a quantitative analysis of the stack gas for the concentrations and mass emissions of particulate matter, metals, or hydrogen chloride (HCl) and chlorine (Cl_2), and computations showing conformance with the applicable emission performance standards;

(5) When a trial burn for DRE, metals, or HCl/CL_2, is required under Sections 266.104(a), 266.106(c) or (d), or 266.107(b)(2) or (c) of this chapter, a quantitative analysis of the scrubber water (if any), ash residues, other residues, and products for the purpose of estimating the fate of the trial POHCs, metals, and chlorine/chloride;

(6) An identification of sources of fugitive emissions and their means of control;

(7) A continuous measurement of carbon monoxide (CO), oxygen, and where required, hydrocarbons (HC), in the stack gas; and

(8) Such other information as the Director may specify as necessary to ensure that the trial burn will determine compliance with the performance standards is Sections 266.104 through 266.107 of this chapter and to establish the operating conditions required by Section 266.102(e) of this chapter as necessary to meet those performance standards.

(g) Interim status boilers and industrial furnaces. For the purpose of determining feasibility of compliance with the performance standards of Sections 266.104 through 266.107 of this chapter and of determining adequate operating conditions under Section 266.103 of this chapter, applicants owning or operating existing boilers or industrial furnaces operated under the interim status standards of Section 266.103 must either prepare and submit a trial burn plan and perform a trial burn in accordance with the requirements of this section or submit other information as specified in Section 270.22(a)(6). Applicants who submit a trial burn plan and receive approval before submission of the part B permit application must complete the trial burn and submit the results specified in paragraph (f) of this section with the part B permit application. If completion of this process conflicts with the date set for submission of the part B application, the applicant must contact the Director to establish a later date for submission of the part B application of the trial burn results. If the applicant submits a trial burn plan with part B of the permit application, the trial burn must be conducted and the results submitted within a time period prior to permit issuance to be specified by the Director.

(j) 40 CFR 270.70 through 270.73 (Subpart G), "Interim Status", have been incorporated by reference including subsequent amendments and editions. For the purpose of this incorporation by reference, "January 1, 1986" shall be substituted for "November 8, 1985" contained in 40 CFR 270.73(c).

SUBPART G -- INTERIM STATUS

270.70 Qualifying for interim status.

(a) Any person who owns or operates an "existing HWM facility" or a facility in existence on the effective date of statutory or regulatory amendments under the Act that render the facility subject to the requirement to have an RCRA permit shall have interim status and shall be treated as having been issued a permit to the extent he or she has:
   (1) Complied with the requirements of Section 3010(a) of RCRA pertaining to notification of hazardous waste activity.

[**Comment:** Some existing facilities may not be required to file a notification under Section 3010(a) of RCRA. These facilities may qualify for interim status by meeting paragraph (a)(2) of this section.]

   (2) Complied with the requirements of Section 270.10 governing submission of Part A applications.

(b) *Failure to qualify for interim status.* If EPA has reason to believe, upon examination of a Part A application, that it fails to meet the requirements of Section 270.13, it shall notify the owner or operator in writing of the apparent deficiency. Such notice shall specify the grounds for EPA's belief that the application is deficient. The owner or operator shall have 30 days from receipt to respond to such a notification and to explain or cure the alleged deficiency in his Part A application. If, after such notification and opportunity for response, EPA determines that the application is deficient it may take appropriate enforcement action.

(c) Paragraph (a) of this section shall not apply to any facility which has been previously denied a RCRA permit or if authority to operate the facility under RCRA has been previously terminated.

270.71 Operation during interim status.

(a) During the interim status period the facility shall not:
   (1) Treat, store, or dispose of hazardous waste not specified in Part A of the permit application;
   (2) Employ processes not specified in Part A of the permit application; or
   (3) Exceed the design capacities specified in Part A of the permit application.

(b) Interim status standards. During interim status, owners or operators shall comply with the interim status standards at 40 CFR Part 265.

270.72 Changes during interim status.

(a) Except as provided in paragraph (b), the owner or operator of an interim status facility may make the following changes at the facility:
   (1) Treatment, storage, or disposal of new hazardous wastes not previously identified in Part A of the permit application (and, in the case of newly listed or identified wastes, addition of the units being used to treat, store, or dispose of the hazardous wastes on the effective date of the listing or identification) if the owner or operator submits a revised Part A permit application prior to such treatment, storage, or disposal;
   (2) Increases in the design capacity of processes used at the facility if the owner or operator submits a revised Part A permit application prior to such a change (along with a justification explaining the need for the change) and the Director approves the changes because:
      (i) There is a lack of available treatment, storage, or disposal capacity at other hazardous waste management facilities, or
      (ii) The change is necessary to comply with a Federal, State, or local requirement.

(3) Changes in the processes for the treatment, storage, or disposal of hazardous waste or addition of processes if the owner or operator submits a revised Part A permit application prior to such change (along with a justification explaining the need for the change) and the Director approves the change because:
  (i) The change is necessary to prevent a threat to human health and the environment because of an emergency situation, or
  (ii) The change is necessary to comply with a Federal, State, or local requirement.

(4) Changes in the ownership or operational control of a facility if the new owner or operator submits a revised Part A permit application no later than 90 days prior to the scheduled change. When a transfer of operational control of a facility occurs, the old owner or operator shall comply with the requirements of 40 CFR Part 265, Subpart H (Financial Requirements), until the new owner or operator has demonstrated to the Director that he is complying with the requirements of that subpart. The new owner or operator must demonstrate compliance with Subpart H requirements within six months of the date of the change in ownership or operational control of the facility. Upon demonstration to the Director by the new owner or operator of compliance with Subpart H, the Director shall notify the old owner or operator in writing that he no longer needs to comply with Subpart H as of the date of demonstration. All other interim status duties are transferred effective immediately upon the date of the change in ownership or operational control of the facility.

(5) Changes made in accordance with an interim status corrective action order issued by EPA under section 3008(h) or other Federal authority, by an authorized State under comparable State authority, or by a court in a judicial action brought by EPA or by an authorized State. Changes under this paragraph are limited to the treatment, storage, or disposal of solid waste from releases that originate within the boundary of the facility.

(6) Addition of newly regulated units for the treatment, storage, or disposal of hazardous waste if the owner or operator submits a revised part A permit application on or before the date on which the unit becomes subject to the new requirements.

(b) Except as specifically allowed under this paragraph, changes listed under paragraph (a) of this section may not be made if they amount to reconstruction of the hazardous waste management facility. Reconstruction occurs when the capital investment in the changes to the facility exceeds 50 percent of the capital cost of a comparable entirely new hazardous waste management facility. If all other requirements are met, the following changes may be made even if they amount to a reconstruction:

(1) Changes made solely for the purposes of complying with the requirements of 40 CFR 265.193 for tanks and ancillary equipment.

(2) If necessary to comply with Federal, State, or local requirements, changes to an existing unit, changes solely involving tanks or containers, or addition of replacement surface impoundments that satisfy the standards of section 3004(o).

(3) Changes that are necessary to allow owners or operators to continue handling newly listed or identified hazardous wastes that have been treated, stored, or disposed of at the facility prior to the effective date of the rule establishing the new listing or identification.

(4) Changes during closure of a facility or of a unit within a facility made in accordance with an approved closure plan.

(5) Changes necessary to comply with an interim status corrective action order issued by EPA under section 3008(h) or other Federal authority, by an authorized State under comparable State authority, or by a court in a judicial proceeding brought by EPA or an authorized State, provided that such changes are limited to the treatment, storage, or disposal of solid waste from releases that originate within the boundary of the facility.

(6) Changes to treat or store, in tanks, or containers, or containment buildings, hazardous wastes subject to land disposal restrictions imposed by Part 268 of this chapter or RCRA section 3004, provided that such changes are made solely for the purpose of complying with Part 268 of this chapter or RCRA section 3004.

(7) Addition of newly regulated units under paragraph (a)(6) of this section.

(c) Changes in the processes for the treatment, storage, or disposal of hazardous waste may be made at a facility or additional processes may be added if the owner or operator submits a revised Part A permit application prior to such a change [along with a justification explaining the need for the change] and the Director approves the change because;

(1) It is necessary to prevent a threat to human health or the environment because of an emergency situation; or

(2) It is necessary to comply with Federal regulations [including the interim status standards at 40 CFR Part 265] or State or local laws.

(d) Changes in the ownership or operational control of a facility may be made if the new owner or operator submits a revised Part A permit application no later than 90 days prior to the scheduled change. When a transfer of ownership or operational control of a facility occurs, the old owner or operator shall comply with the requirements

of 40 CFR 265, Subpart H [Financial Requirements], until the new owner or operator has demonstrated to the Director that he is complying with the requirements of that Subpart. The new owner or operator must demonstrate compliance with Subpart H requirements within six months of the date of the change in the ownership or operational control of the facility. Upon demonstration to the Director by the new owner or operator of compliance with Subpart H, the Director shall notify the old owner or operator in writing that he no longer needs to comply with Subpart H as of the date of demonstration. All other interim status duties are transferred effective immediately upon the date of the change of ownership or operational control of the facility.

(e) In no event shall changes be made to an HWM facility during interim status which amount to reconstruction of the facility. Reconstruction occurs when the capital investment in the changes to the facility exceeds fifty percent of the capital cost of a comparable entirely new HWM facility. Changes prohibited under this paragraph do not include changes to treat or store in containers or tanks hazardous wastes subject to land disposal restrictions imposed by Part 268 or RCRA Section 3004, provided that such changes are made solely for the purpose of complying with Part 268 or RCRA Section 3004.

270.73 Termination of interim status.

Interim status terminates when:

(a) Final administrative disposition of a permit application is made; or

(b) Interim status is terminated as provided in Section 270.10(e)(5).

(c) For owners or operators of each land disposal facility which has been granted interim status prior to November 8, 1984, on January 1, 1986, unless:

(1) The owner or operator submits a Part B application for a permit for such facility prior to that date; and

(2) The owner or operator certifies that such facility is in compliance with all applicable ground water monitoring and financial responsibility requirements.

(d) For owners or operators of each land disposal facility which is in existence on the effective date of statutory or regulatory amendments under the Act that render the facility subject to the requirement to have a RCRA permit and which is granted interim status, twelve months after the date on which the facility first becomes subject to such permit requirement unless the owner or operator of such facility:

(1) Submits a Part B application for an RCRA permit for such facility before the date 12 months after the date on which the facility first becomes subject to such permit requirement; and

(2) Certifies that such facility is in compliance with all applicable ground water monitoring and financial responsibility requirements.

(e) For owners or operators of any land disposal unit that is granted authority to operate under Section 270.72(a)(1), (2) or (3), on the date 12 months after the effective date of such requirement, unless the owner or operator certifies that such unit is in compliance with all applicable ground-water monitoring and financial responsibility requirements.

(f) For owners and operators of each incinerator facility which has achieved interim status prior to November 8, 1984, interim status terminates on November 8, 1989, unless the owner or operator of the facility submits a part B application for a RCRA permit for an incinerator facility by November 8, 1986.

(g) For owners or operators of any facility (other than a land disposal or an incinerator facility) which has achieved interim status prior to November 8, 1984, interim status terminates on November 8, 1992, unless the owner or operator of the facility submits a part B application for a RCRA permit for the facility by November 8, 1988.

(k) The following are additional permitting requirements concerning operating record of other facilities.

(1) An applicant for a permit for a hazardous waste facility shall submit a disclosure statement to the Department as a part of the application for a permit or any time thereafter specified by the Department. The disclosure statement shall be supported by an affidavit attesting to the truth and completeness of the facts asserted in the statement and shall include:
   (A) A brief description of the form of the business (e.g. partnership, sole proprietorship, corporation, association, or other);
   (B) The name and address of any hazardous waste facility constructed or operated after October 21, 1976, by the applicant or any parent or subsidiary corporation if the applicant is a corporation; and
   (C) A list identifying any legal action taken against any facility identified in Part (k)(1)(B) of this Rule involving:
      (i) any administrative ruling or order issued by any state, federal or local authority relating to revocation of any environmental or waste management permit or license, or to a violation of any state or federal statute or local ordinance relating to waste management or environmental protection;
      (ii) any judicial determination of liability or conviction under any state or federal law or local ordinance relating to waste management or environmental protection; and
      (iii) any pending administrative or judicial proceeding of the type described in this Part.
   (D) The identification of each action described in Part (k)(1)(C) of this Rule shall include the name and location of the facility that the action concerns, the agency or court that heard or is hearing the matter, the title, docket or case number, and the status of the proceeding.

(2) In addition to the information set forth in Subparagraph (k)(1) of this Rule, the Department may require from any applicant such additional information as it deems necessary to satisfy the requirements of G.S. 130A-295. Such information may include, but shall not be limited to:
   (A) The names, addresses, and titles of all officers, directors, or partners of the applicant and of any parent or subsidiary corporation if the applicant is a corporation;
   (B) The name and address of any company in the field of hazardous waste management in which the applicant business or any of its officers, directors, or partners, hold an equity interest and the name of the officer, director, or partner holding such interest; and
   (C) A copy of any administrative ruling or order and of any judicial determination of liability or conviction described in Part (k)(1)(C) of this Rule, and a description of any pending administrative or judicial proceeding in that item.

(3) If the Department finds that any part or parts of the disclosure statement is not necessary to satisfy the requirements of G.S. 130A-295, such information shall not be required.

(l) An applicant for a new, or modification to an existing, commercial facility permit, shall provide a description and justification of the need for the facility.

(m) Requirements for Off-site Recycling Facilities.

(1) The permit requirements of this Rule apply to owners and operators of off-site recycling facilities.
(2) The following provisions of 40 CFR Part 264, as incorporated by reference, shall apply to owners and operators of off-site recycling facilities:
    (A) Subpart B - General Facility Standards
    (B) Subpart C - Preparedness and Prevention
    (C) Subpart D - Contingency Plan and Emergency Procedures
    (D) Subpart E - Manifest System, Recordkeeping and Reporting
    (E) Subpart G - Closure and Post-closure
    (F) Subpart H - Financial Requirements
    (G) Subpart I - Use and Management of Containers
    (H) Subpart J - Tank Systems
    (I) 264.101 - Corrective Action for Solid Waste Management Units.
    (J) Subpart X - Miscellaneous Units
    (K) Subpart DD - Containment Buildings
(3) The requirements listed in Subparagraph (m)(2) of this Rule apply to the entire off-site recycling facility, including all recycling units, staging and process areas, and permanent and temporary storage areas for wastes.
(4) The following provisions of 15A NCAC 13A .0009 shall apply to owners and operators of off-site recycling facilities:
    (A) The substitute financial requirements of Rule .0009 (i)(1), (2) and (4).
    (B) The additional standards of Rule .0009 (r)(1), (2), (3), (6) and (7).
(5) The owner or operator of an off-site recycling facility shall keep a written operating record at his facility.
(6) The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility:
    (A) A description and the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage, or recycling at the facility.
    (B) The location of all hazardous waste within the facility and the quantity at each location. This information must include cross-references to specific manifest document numbers if the waste was accompanied by a manifest.
    (C) Documentation of the fate of all hazardous wastes received from off-site or generated on-site. This shall include records of the sale, reuse, off-site transfer, or disposal of all waste materials.

(n) Permit Fees for Commercial Hazardous Waste Facilities.

(1) An applicant for a permit modification for a commercial hazardous waste facility shall pay an application fee as follows:
   (A) Class 1 permit modification $100
   (B) Class 2 permit modification $1,000
   (C) Class 3 permit modification $5,000

{Note: Class 1 permit modifications which do not require prior approval of the Division Director are excluded from the fee requirement.}

(2) The application fee for a new permit, permit renewal, or permit modification must accompany the application, and is non-refundable. The application shall be considered incomplete until the fee is paid. Checks should be made payable to: Division of Solid Waste Management.

History Note: Statutory Authority G.S.130A-294(c); 130A-294.1; 130A-295(a)(1),(2),(c); 150B-21.6;
Eff. November 19, 1980;
Amended Eff. November 19, 1989; June 1, 1988; February 1, 1988; December 1, 1987;
August 1, 1987; May 1, 1987; February 1, 1987; October 1, 1986;
July 1, 1986; May 1, 1986; January 1, 1986; October 1, 1985; July 1, 1985;
April 1, 1985; April 1, 1984; October 1, 1983; October 1, 1982;
September 15, 1981.
Transferred and Recodified from 10 NCAC 10F .0034 April 4, 1990;
Amended Eff. August 1, 1990;
Recodified from 15A NCAC 13A .0014 Eff. August 30, 1990;
Amended Eff. April 1, 1993; August 1, 1991; October 1, 1990;

.0114 REQUIREMENTS FOR AUTHORIZATION OF STATE HAZARDOUS WASTE PROGRAMS - PART 271

40 CFR 271.17, "Sharing of information", has been incorporated by reference including subsequent amendments and editions.

SUBPART A -- REQUIREMENTS FOR FINAL AUTHORIZATION

271.17 Sharing of information.

(a) Any information obtained or used in the administration of a State program shall be available to EPA upon request without restriction. If the information has been submitted to the State under a claim of confidentiality, the State must submit that claim to EPA when providing information under this subpart. Any information obtained from a State and subject to a claim of confidentiality will be treated in accordance with the regulations in 40 CFR Part 2. If EPA obtains from a State information that is not claimed to be confidential, EPA may make that information available to the public without further notice.

(b) EPA shall furnish to States with approved programs the information in its files not submitted under a claim of confidentiality which the State needs to implement its approved program. EPA shall furnish to States with approved programs information submitted to EPA under a claim of confidentiality, which the State needs to implement its approved program, subject to the conditions in 40 CFR Part 2.

(c) (1) The State program must provide for the public availability of information obtained by the State regarding facilities and sites for the treatment, storage, and disposal of hazardous waste. Such information must be made available to the public in substantially the same manner, and to the same degree, as would be the case if the Administrator was carrying out the provisions of Subtitle C of RCRA in the State.

(2) A State must revise its program to comply with his section in accordance with Section 271.21(e)(2)(ii). Interim authorization under Section 271.24 is not available to demonstrate compliance with this section.

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. January 1, 1986.
Amended Eff. June 1, 1988; December 1, 1987; August 1, 1987;
May 1, 1987; February 1, 1987; October 1, 1986.
Transferred and Recodified from 10 NCAC 10F .0041 Eff. April 4, 1990;
Amended Eff. April 1, 1993; October 1, 1990; August 30, 1990;
Recodified from 15A NCAC 13A .0014 Eff. December 20, 1996.

NOTE: "ALL READERS OF THESE REGULATIONS SHOULD BE AWARE THAT THE DIRECTOR OF THE OFFICE OF ADMINISTRATIVE HEARING MAY MAKE EDITORIAL CHANGES IN THE ORDER, TITLES, NUMBERING, OR OTHER SUCH CHANGES UNDER G.S. 150B-61; HOWEVER, SUCH CHANGES DO NOT ALTER THE EFFECTIVE DATE OF THE SUBSTANCE OF THE RULE."

15A NCAC 13A

.0116 SPECIAL PURPOSE COMMERCIAL HAZARDOUS WASTE FACILITY

(a) The Department shall evaluate all commercial hazardous waste facilities to determine a score for each facility in accordance with paragraph (c) of this Rule.

(b) A commercial hazardous waste facility (other than an incinerator or a land disposal facility) with a volume of waste of 20,000 tons or less per year and having a total score pursuant to Paragraph (c) of this Rule of less than 33 is designated as a special purpose commercial hazardous waste facility. These facilities shall be classified as follows:

Total Score	Category
1 - 13	1
14 - 22	2
23 - 32	3

(c) A score for each facility shall be determined by adding the total score for Subparagraphs (c)(1) - (c)(7) of this Rule and subtracting the score for Subparagraph (c)(8) of this Rule.

(1) A score shall be assigned for smallness of the facility by adding the applicable score for storage and the applicable score for treatment using Table 1.

Table 1

Smallness of Facility	Constructed Capacity	Score
Storage:	<10,000	1
(gallons)	10,000-100,000	2
	>100,000	3
Treatment:	<10,000	1
(gallons/	10,000-100,000	2
per day)	>100,000	3

(2) A score shall be assigned for type of treatment permitted by adding the score for each type of treatment being performed by the facility using Table 2.

Table 2

Type of Treatment Being Performed	Score
Storage Only	1
Solvent Recovery	2
Metal Recovery	2
Energy Recovery	2
Fuel Blending	2
Aqueous Treatment	3
Stabilization	2
Incineration	5
Residuals Management	5
Other Treatment	2

(3) A score shall be assigned for the nature of hazardous waste by adding the score for acute waste, if acute waste totals more than 1,000 pounds, and the score for each other type of hazardous waste that constitutes ten percent or more of the total hazardous waste handled by the facility, using Table 3. However, if the facility is permitted for storage only and no treatment is performed, the score for nature of hazardous waste shall be reduced by one-half for each waste stream stored only.

Table 3

Nature of Hazardous Waste (from Annual Report)	Score
Corrosive	1
Ignitable	2
Reactive	2
Toxicity Characteristic	2
Listed Toxic	2
Acute	3

(4) A score shall be assigned for volume of hazardous waste by using the applicable score in Table 4.

Table 4

Volume of Waste (Tons from Annual Report)	Score
<2000	1
2000-10,000	2
10,000-20,000	3

(5) A score shall be assigned for uniformity, similarity and lack of diversity of waste streams by using the applicable score in Table 5.

Table 5

Uniformity, Similarity, Lack of Diversity of Waste Streams (EPA Waste Numbers) From Annual Report	Score
<5	1
5-75	2
>75	3

(6) A score shall be assigned for predictability and treatability of site specific waste streams by using the applicable score in Table 6.

Table 6

Predictability and Treatability of Waste Streams	Score
Simple Waste Streams and Treatment	1
Complex Waste Streams and Treatment (Incompatibles, highly toxic, or multicoded waste streams)	2

(7) A score shall be assigned for compliance history for the past two years by using the highest applicable score in Table 7.

Table 7

Compliance History for Past Two Years	Score
Class II Violations	1
Class I Violations	2
Penalties	3
Injunctions	5

(8) A score shall be assigned for on-site reclamation by using the applicable score in Table 8.

Table 8

Reclamation (Credit Given)	Score
Pretreatment for Off-site Reclamation	1
On-site Reclamation	2

(d) The information referred to in Paragraph (c) of this Rule shall be determined based on the facility's permit, the previous year's annual report, and compliance history. If no annual report was submitted, quarterly projections of waste volume shall be submitted to the Department by the facility. Each facility may be re-evaluated at any time new information is received by the Department concerning the factors in Paragraph (c) of this Rule.

(e) The frequency of inspections at special purpose commercial hazardous waste facilities shall be determined by the facility's classification as follows:

Category	Minimum Inspections
1	2 per month
2	4 per month
3	6 per month

History Note: Filed as a Temporary Adoption Eff. February 15, 1991 for a Period of 180 days to expire on August 14, 1991;
Authority G.S. 130A-295.02(j);
ARRC Objection Lodged February 25, 1991;
AARC Objection Removed March 21, 1991;
Eff. August 1, 1991;
Amended Eff. April 1, 1994;
Recodified from 15A NCAC 13A .0016 Eff. December 20, 1996.

15A NCAC 13A

.0117 FEE SCHEDULES

(a) A commercial hazardous waste storage, treatment, or disposal facility other than a special purpose facility shall pay monthly, in addition to the fees applicable to all hazardous waste storage, treatment, or disposal facilities as required by G.S. 130A-294.1, a charge of forty- one dollars ($41.00) per hour of operation. The fee shall be paid for any time when hazardous waste is managed or during periods of maintenance, repair, testing, or calibration. Each facility shall submit an operational schedule to the Department on a quarterly basis.

(b) A special purpose commercial hazardous waste facility shall pay monthly, in addition to the fees applicable to all hazardous waste treatment, storage or disposal facilities as required by G.S.130A-294.1, a charge of three dollars $3.00 per ton of hazardous waste received during the previous month and an additional charge based on the frequency of inspections as follows:

Category	Fee
1	$888.00
2	$1,776.00
3	$2,664.00

History Note: Authority G.S. 130A-295.02(h);
Temporary Adoption Eff. February 15, 1991 for a Period of 180 days to expire on August 14, 1991;
ARRC Objection Lodged February 25, 1991;
ARRC Objection Lodged March 21, 1991;
Eff. August 1, 1991;
Recodified from 15A NCAC 13A .0017 Eff. December 20, 1996.

15A NCAC 13A .0118 STANDARDS FOR THE MANAGEMENT OF USED OIL

(a) 40 CFR 279.1 (Subpart A), "Definitions", has been incorporated by reference including subsequent amendments and editions, except that the Definition for "Used Oil" is defined by G.S. 130A-290(b) and is not incorporated by reference.

SUBPART A -- DEFINITIONS

279.1 Definitions.

Terms that are defined in Sections 260.10, 261.1, and 280.12 of this chapter have the same meanings when used in this part.

Aboveground tank means a tank used to store or process used oil that is not an underground storage tank as defined in Section 280.12 of this chapter.

Container means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled.

Do-it-yourselfer used oil collection center means any site or facility that accepts/aggregates and stores used oil collected only from household do-it-yourselfers.

Existing tank means a tank that is used for the storage or processing of used oil and that is in operation, or for which installation has commenced on or prior to the effective date of the authorized used oil program for the State in which the tank is located. Installation will be considered to have commenced if the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin installation of the tank and if either (1) A continuous on-site installation program has begun, or (2) The owner or operator has entered into contractual obligations-which cannot be canceled or modified without substantial loss-for installation of the tank to be completed within a reasonable time.

Household "do-it-yourselfer" used oil means oil that is derived from households, such as used oil generated by individuals who generate used oil through the maintenance of their personal vehicles.

Household "do-it-yourselfer" used oil generator means an individual who generates household "do-it-yourselfer" used oil.

New tank means a tank that will be used to store or process used oil and for which installation has commenced after the effective date of the authorized used oil program for the State in which the tank is located.

Petroleum refining facility means an establishment primarily engaged in producing gasoline, kerosine, distillate fuel oils, residual fuel oils, and lubricants, through fractionation, straight distillation of crude oil, redistillation of unfinished petroleum derivatives, cracking or other processes (i.e., facilities classified as SIC 2911).

Processing means chemical or physical operations designed to produce from used oil, or to make used oil more amenable for production of, fuel oils, lubricants, or other used oil-derived product. Processing includes, but is not limited to: blending used oil with virgin petroleum products, blending used oils to meet the fuel specification, filtration, simple distillation, chemical or physical separation and re-refining.

Re-refining distillation bottoms means the heavy fraction produced by vacuum distillation of filtered and dehydrated used oil. The composition of still bottoms varies with column operation and feedstock.

Tank means any stationary device, designed to contain an accumulation of used oil which is constructed primarily of non-earthen materials, (e.g., wood, concrete, steel, plastic) which provides structural support.

"Used oil" - **See G.S. 130A-290(b)**

Used oil aggregation point means any site or facility that accepts, aggregates, and/or stores used oil collected only from other used oil generation sites owned or operated by the owner or operator of the aggregation point, from which used oil is transported to the aggregation point in shipments of no more than 55 gallons. Used oil aggregation points may also accept used oil from household do-it-yourselfers.

Used oil burner means a facility where used oil not meeting the specification requirements in Section 279.11 is burned for energy recovery in devices identified in Section 279.61(a).

Used oil collection center means any site or facility that is registered/ licensed/permitted/recognized by a state/county/municipal government to manage used oil and accepts/aggregates and stores used oil collected from used oil generators regulated under subpart C of this part who bring used oil to the collection center in shipments of no more than 55 gallons under the provisions of Section 279.24. Used oil collection centers may also accept used oil from household do-it-yourselfers.

Used oil fuel marketer means any person who conducts either of the following activities:

(1) Directs a shipment of off-specification used oil from their facility to a used oil burner; or
(2) First claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in Section 279.11 of this part.

Used oil generator means any person, by site, whose act or process produces used oil or whose act first causes used oil to become subject to regulation.

Used oil pocessor/re-refiner means a facility that processes used oil.

Used oil transfer facility means any transportation related facility including loading docks, parking areas, storage areas and other areas where shipments of used oil are held for more than 24 hours and not more than 35 days during the normal course of transportation or prior to an activity performed pursuant to §279.20(b)(2). Transfer facilities that store used oil for more than 35 days are subject to regulation under subpart F of this part.

Used oil transporter means any person who transports used oil, any person who collects used oil from more than one generator and transports the collected oil, and owners and operators of used oil transfer facilities. Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation but, with the following exception, may not process used oil. Transporters may conduct incidental processing operations that occur in the normal course of used oil transportation (e.g., settling and water separation), but that are not designed to produce (or make more amenable for production of) used oil derived products or used oil fuel.

(b) 40 CFR 279.10 through 279.12 (Subpart B), "Applicability", have been incorporated by reference including subsequent amendments and editions.

SUBPART B -- APPLICABILITY

279.10 Applicabiliy.

This section identifies those materials which are subject to regulation as used oil under this part. This section also identifies some materials that are not subject to regulation as used oil under this part, and indicates whether these materials may be subject to regulation as hazardous waste under parts 260 through 266, 268, 270, and 124 of this chapter.

(a) *Used oil.* EPA presumes that used oil is to be recycled unless a used oil handler disposes of used oil, or sends used oil for disposal. Except as provided in Section 279.11, the regulations of this part apply to used oil, and to materials identified in this section as being subject to regulation as used oil, whether or not the used oil or material exhibits any characteristics of hazardous waste identified in subpart C of part 261 of this chapter.

(b) *Mixtures of used oil and hazardous waste-*

(1) *Listed hazardous waste.*

(i) Mixtures of used oil and hazardous waste that is listed in subpart D of part 261 of this chapter are subject to regulation as hazardous waste under parts 260 through 266, 268, 270, and 124 of this chapter, rather than as used oil under this part.

(ii) *Rebuttable presumption for used oil.* Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed In subpart D of part 261 of this chapter. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Edition III, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed In appendix VIII of part 261 of this chapter). EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents. P.O. Box 371954, Pittsburgh, PA 15250-7954, (202) 783-3238 (document number 955-001-00000-1).

(A) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement as described in Section 279.24(c), to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.

(B) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

(2) *Characteristic hazardous waste.* Mixtures of used oil and hazardous waste that solely exhibits one or more of the hazardous waste characteristic identified in subpart C of part 261 of this chapter and mixtures of used oil and hazardous waste that is listed in subpart D solely because it exhibits one or more of the characteristics of hazardous waste identified in subpart C are subject to:

(i) Except as provided in paragraph (b)(2)(iii) of this section, regulation as hazardous waste under parts 260 through 266, 268, 270, and 124 of this chapter rather than as used oil under this part, if the resultant mixture exhibits any characteristics of hazardous waste identified in subpart C of part 261 of this chapter; or

(ii) Except as specified in Section 279.10(b)(iii), regulation as used oil under this part, if the resultant mixture does not exhibit any characteristics of hazardous waste identified under subpart C of part 261 of this chapter.

(iii) Regulation as used oil under this part, if the mixture is of used oil and a waste which is hazardous solely because it exhibits the characteristic of ignitability (e.g., ignitable only mineral spirits), provided that the resultant mixture does not exhibit the characteristic of ignitability under Section 261.21 of this chapter.

(3) *Conditionally exempt small quantity generator hazardous waste.* Mixtures of used oil and conditionally exempt small quantity generator hazardous waste regulated under Section 261.5 of this chapter are subject to regulation as used oil under this part.

(c) *Materials containing or otherwise contaminated with used oil.*

(1) Except as provided in paragraph (c)(2) of this section, materials containing or otherwise contaminated with used oil from which the used oil has been properly drained or removed to the extent possible such that no visible signs of free-flowing oil remain in or on the material:

(i) Are not used oil and thus not subject to this part, and

(ii) If applicable are subject to the hazardous waste regulations of parts 124, 260 through 266, 268, and 270 of this chapter.

(2) Materials containing or otherwise contaminated with used oil that are burned for energy recovery are subject to regulation as used oil under this part.

(3) Used oil drained or removed from materials containing or otherwise contaminated with used oil is subject to regulation as used oil under this part.

(d) *Mixtures of used oil with products.*

(1) Except as provided in paragraph (d)(2) of this section, mixtures of used oil and fuels or other fuel products are subject to regulation as used oil under this part.

(2) Mixtures of used oil and diesel fuel mixed on-site by the generator of the used oil for use in the generator's own vehicles are not subject to this part once the used oil and diesel fuel have been mixed. Prior to mixing, the used oil is subject to the requirements of subpart C of this part.

(e) *Materials derived from used oil.*

(1) Materials that are reclaimed from used oil that are used beneficially and are not burned for energy recovery or used In a manner constituting disposal (e.g., re-refined lubricants) are:

(i) Not used oil and thus are not subject to this part, and

(ii) Not solid wastes and are thus not subject to the hazardous waste regulations of parts 260 through 266, 268, 270 and 124 of this chapter as provided in 261.3(c)(2)(i) of this chapter.

(2) Materials produced from used oil that are burned for energy recovery (e.g., used oil fuels) are subject to regulation as used oil under this part.

(3) Except as provided In paragraph (e)(4) of this section, materials derived from used oil that are disposed of or used in a manner constituting disposal are:

(i) Not used oil and thus are not subject to this Part, and

(ii) Are solid wastes and thus are subject to the hazardous waste regulations of parts 260 through 266, 268, 270, and 124 of this chapter if the materials are listed or identified as hazardous wastes.

(4) Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products are not subject to this part:

(i) Not subject to this part at this time,

(ii) Not subject to the hazardous waste regulations of parts 260 through 266, 268, 270, and 124 of this chapter at this time.

(f) *Wastewater.* Wastewater, the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act (including wastewaters at facilities which have eliminated the discharge of wastewater), contaminated with de minimis quantities of used oil are not subject to the requirements or this part. For purposes of this paragraph, "de minimas" quantities or used oils are defined as small spills, leaks, or drippings from pumps, machinery, pipes, and other similar equipment during normal operations or small amounts of oil lost to the wastewater treatment system during washing or draining operations. This exception will not apply if the used oil is discarded as a result of abnormal manufacturing operations resulting in substantial leaks, spills. or other releases, or to used oil recovered from wastewaters.

(g) *Used oil introduced into crude oil pipelines or a petroleum refining facility.*

(1) Used oil mixed with crude oil or natural gas liquids (e.g., in a production separator or crude oil stock tank) for insertion into a crude oil pipeline is exempt from the requirements of this part. The used oil is subject to the requirements of this part prior to the mixing of used oil with crude oil or natural gas liquids.

(2) Mixtures of used oil and crude oil or natural gas liquids containing less than 1% used oil that are being stored or transported to a crude oil pipeline or petroleum refining facility for insertion into the refining process at a point prior to crude distillation or catalytic cracking are exempt from the requirements of this part.

(3) Used oil that is inserted into the petroleum refining facility process before crude distillation or catalytic cracking without prior mixing with crude oil is exempt from the requirements of this part provided that the used oil constitutes less than 1% of the crude oil feed to any petroleum refining facility process unit at any given time. Prior to insertion into the petroleum refining facility process, the used oil is subject to the requirements of this part.

(4) Except as provided in paragraph (g)(5) of this section, used oil that is introduced into a petroleum refining facility process after crude distillation or catalytic cracking is exempt from the requirements of this part

only if the used oil meets the specification of §279.11. Prior to insertion into the petroleum refining facility process, the used oil is subject to the requirements of this part.

(5) Used oil that is incidentally captured by a hydrocarbon recovery system or wastewater treatment system as part of routine process operations at a petroleum refining facility and inserted into the petroleum refining facility process is exempt from the requirements of this part. This exemption does not extend to used oil which is intentionally introduced into a hydrocarbon recovery system (e.g., by pouring collected used oil into the waste water treatment system).

(6) Tank bottoms from stock tanks containing exempt mixtures of used oil and crude oil or natural gas liquids are exempt from the requirements of this part.

(h) *Used oil on vessels.* Used oil produced on vessels from normal shipboard operations is not subject to this part until it is transported ashore.

(i) *Used Oil containing PCBs.* In addition to the requirements of 40 CFR part 279, marketers and burners of used oil who market used oil containing any quantifiable level of PCBs are subject to the requirements found at 40 CFR 761.20(e).

279.11 Used oil specifications.

Used oil burned for energy recovery, and any fuel produced from used oil by processing, blending, or other treatment is subject to regulation under this part unless it is shown not to exceed any of the allowable levels of the constituents and properties in the specification shown in Table 1. Once used oil that is to be burned for energy recovery has been shown not to exceed any specification and the person making that showing complies with Sections 279.72, 279.73, and 279.74(b), the used oil is no longer subject to this part.

Table 1--Used Oil Not Exceeding any Specification Level is Not Subject To This Part When Burned For Energy Recovery[1]

Constituent/properly	Allowable level
Arsenic	5 ppm maximum.
Cadmium	2 ppm maximum.
Chromium	10 ppm maximum.
Lead	100 ppm maximum.
Flash point	100°F minimum.
Total halogens [Note: Applicable standards for the burning of used oil containing PCBs are imposed by 40 CFR 761.20(e).]	4,000 ppm maximum.[2]

[1] The specification does not apply to mixtures of used oil and hazardous waste that continue to be regulated as hazardous waste (See Section 279.10(b)).

[2] Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under Section 279.10(b)(1). Such used oil is subject to subpart H of part 266 of this chapter rather than this part when burned for energy recovery unless the presumption of mixing can be successfully rebutted.

279.12 Prohibitions

(a) *Surface impoundment prohibition.* Used oil shall not be managed In surface impoundments or waste piles unleas the units are subject to regulation under parts 264 or 265 of this chapter.

(b) *Use as a dust suppressant.* The use of used oil as a dust suppressant is prohibited, except when such activity takes place in one of the states listed in Section 279.82(c).

(c) *Burning in particular units.* Off-specification used oil fuel may be burned for energy recovery in only the following devices:

(1) Industrial furnaces identified In Section 260.10 of this chapter;

(2) Boilers, as defined in Section 260.10 of this chapter, that are identified as follows:

(i) Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;

(ii) Utility boilers used to produce electric power, steam, heated or cooled air; or other gases or fluids for sale; or

(iii) Used oil-fired space heaters provided that the burner meets the provisions of Section 279.23.

(3) Hazardous waste incinerators subject to regulation under subpart O of parts 264 or 265 of this chapter.

(c) 40 CFR 279.20 through 279.24 (Subpart C), "Standards for Used Oil Generators", have been incorporated by reference including subsequent amendments and editions.

SUBPART C - STANDARDS FOR USED OIL GENERATORS

Section 279.20 Applicability.

(a) *General.* Except as provided in paragraphs (a)(1) through (a)(4) of this section, this subpart applies to all used oil generators. 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.
  (1) *Household "do-it-yourselfer" used oil generators.* Household "do-it-yourselfer" used oil generators are not subject to regulation under this part.
  (2) *Vessels.* Vessels at sea or at port are not subject to this subpart. For purposes of this subpart, used oil produced on vessels from normal shipboard operations is considered to be generated at the time it is transported ashore. The owner or operator of the vessel and the person(s) removing or accepting used oil from the vessel are co-generators of the used oil and are both responsible for managing the waste in compliance with this subpart once the used oil is transported ashore. The co-generators may decide among them which party will fulfill the requirements of this subpart.
  (3) *Diesel fuel.* Mixtures of used oil and diesel fuel mixed by the generator of the used oil for use in the generator's own vehicles are not subject to this part once the used oil and diesel fuel have been mixed. Prior to mixing, the used oil fuel is subject to the requirements of this subpart.
  (4) *Farmers.* Farmers who generate an average of 25 gallons per month or less of used oil from vehicles or machinery used on the farm in a calendar year are not subject to the requirements of this part.

(b) *Other applicable provisions.* Used oil generators who conduct the following activities are subject to the requirements of other applicable provisions of this part as indicated in paragraphs (b)(1) through (5) of this section:
  (1) Generators who transport used oil, except under the self-transport provisions of Section 279.24 (a) and (b), must also comply with subpart E of this part.
  (2) (i) Except as provided in paragraph (b)(2)(ii) of this section, generators who process or re-refine used oil must also comply with subpart F of this part.
    (ii) Generators who perform the following activities are not processors provided that the used oil is generated on-site and is not being sent off-site to a burner of on-or off-specification used oil fuel.
      (A) Filtering, cleaning, or otherwise reconditioning used oil before returning it for reuse by the generator;
      (B) Separating used oil from wastewater generated on-site to make the wastewater acceptable for discharge or reuse pursuant to section 402 or section 307(b) of the Clean Water Act or other applicable Federal or state regulations governing the management or discharge of wastewaters;
      (C) Using oil mist collectors to remove small droplets of used oil from in-plant air to make plant air suitable for continued recirculation;
      (D) Draining or otherwise removing used oil from materials containing or otherwise contaminated with used oil in order to remove excessive oil to the extent possible pursuant to §279.10(c); or
      (E) Filtering, separating or otherwise reconditioning used oil before burning it in a space heater pursuant to §279.23.
  (3) Generators who burn off-specification used oil for energy recovery, except under the on-site space heater provisions of Section 279.23, must also comply with subpart G of this part.
  (4) Generators who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in Section 279.11 must also comply with subpart H of this part.
  (5) Generators who dispose of used oil, including the use of used oil as a dust suppressant, must also comply with subpart I of this part.

279.21 Hazardous waste mixing.

(a) Mixtures of used oil and hazardous waste must be managed in accordance with Section 279.10(b).

(b) The rebuttable presumption for used oil of Section 279.10(b)(1)(ii) applies to used oil managed by generators. Under the rebuttable presumption for used oil of Section 279.10(b)(1)(ii), used oil containing greater than 1,000 ppm total halogens is presumed to be a hazardous waste and thus must
be managed as hazardous waste and not as used oil unless the presumption is rebutted. However, the rebuttable presumption does not apply to certain metalworking oils/fluids and certain used oils removed from refrigeration units.

279.22 Used oil storage.

Used oil generators are subject to all applicable Spill Prevention, Control and Countermeasures (40 CFR part 112) in addition to the requirements of this Subpart. Used oil generators are also subject to the Underground Storage Tank (40 CFR part 280) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this subpart.

(a) *Storage units.* Used oil generators shall not store used oil in units other than tanks, containers. or units subject to regulation under parts 264 or 265 of this chapter.

(b) *Condition of units.* Containers and aboveground tanks used to store used oil at generator facilities must be:
  (1) In good condition (no severe rusting, apparent structural defects or deterioration); and
  (2) Not leaking (no visible leaks).

(c) *Labels.*
  (1) Containers and aboveground tanks used to store used oil at generator facilities must be labeled or marked clearly with the words "Used Oil."
  (2) Fill pipes used to transfer used oil into underground storage tanks at generator facilities must be labeled or marked clearly with the words "Used Oil."

(d) *Response to releases.* Upon detection of a release of used oil to the environment not subject to the requirements of part 280, subpart F of this chapter which has occurred after the effective date of the authorized used oil program for the State in which the release is located, a generator must perform the following cleanup steps:
  (1) Stop the release;
  (2) Contain the released used oil;
  (3) Clean up and manage properly the released used oil and other materials; and
  (4) If necessary to prevent future releases, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

279.23 On-site burning In space heaters.

Generators may burn used oil in used oil-fired space heaters provided that:

(a) The heater burns only used oil that the owner or operator generates or used oil received from household do-it-yourself used oil generators;

(b) The heater is designed to have a maximum capacity of not more than 0.5 million Btu per hour; and

(c) The combustion gases from the heater are vented to the ambient air.

279.24 Off-site shipments.

Except as provided in paragraphs (a) through (c) of this section, generators must ensure that their used oil is transported only by transporters who have obtained EPA identification numbers.

(a) *Self-transportation of small amounts to approved collection centers.* Generators may transport, without an EPA identification number, used oil that is generated at the generator's site and used oil collected from household do-it-yourselfers to a used oil collection center provided that:
  (1) The generator transports the used oil in a vehicle owned by the generator or owned by an employee of the generator;
  (2) The generator transports no more than 55 gallons of used oil at any time; and
  (3) The generator transports the used oil to a used oil collection center that is registered, licensed, permitted, or recognized by a state/county/municipal government to manage used oil.

(b) *Self-transportation of small amounts to aggregation points owned by the generator.* Generators may transport, without an EPA Identification number, used oil that is generated at the generator's site to an aggregation point provided that:
  (1) The generator transports the used oil in a vehicle owned by the generator or owned by an employee of the generator;
  (2) The generator transports no more than 55 gallons of used oil at any time; and

(3) The generator transports the used oil to an aggregation point that is owned and/or operated by the same generator.

(c) *Tolling arrangements.* Used oil generators may arrange for used oil to be transported by a transporter without an EPA identification number if the used oil is reclaimed under a contractual agreement pursuant to which reclaimed oil is returned by the processor/re-refiner to the generator for use as a lubricant, cutting oil, or coolant. The contract (known as a "tolling arrangement") must indicate:

(1) The type of used oil and the frequency of shipments;

(2) That the vehicle used to transport the used oil to the processing/re-refining facility and to deliver recycled used oil back to the generator is owned and operated by the used oil processor/re-refiner; and

(3) That reclaimed oil will be returned to the generator.

(d) 40 CFR 279.30 through 279.32 (Subpart D), "Standards for Used Oil Collection Centers and Aggregation Points", have been incorporated by reference including subsequent amendments and editions.

SUBPART D - STANDARDS FOR USED OIL COLLECTION CENTERS AND AGGREGATION POINTS

279.30 Do-it-yourselfer used oil collection centers.

(a) Applicability. This section applies to owners or operators of all do-it-yourselfer (DIY) used oil collection centers. A DIY used oil collection center is any site or facility that accepts/ aggregates and stores used oil collected only from household do-it-yourselfers.

(b) DIY used oil collection center requirements. Owners or operators of all DIY used oil collection centers must comply with the generator standards in subpart C of this part.

279.31 Used oil collection centers.

(a) *Applicability.* This section applies to owners or operators of used oil collection centers. A used oil collection center is any site or facility that accepts/aggregates and stores used oil collected from used oil generators regulated under subpart C of this part who bring used oil to the collection center in shipments of no more than 55 gallons under the provisions of Section 279.24(a). Used oil collection centers may also accept used oil from household do-it-yourselfers.

(b) *Used oil collection center requirements.* Owners or operators of all used oil collection centers must:

(1) Comply with the generator standards in subpart C of this part; and
(2) Be registered/licensed/permitted/ recognized by a state/county/municipal government to manage used oil.

279.32 Used oil aggregation points owned by the generator.

(a) *Applicability.* This section applies to owners or operators of all used oil aggregation points. A used oil aggregation point is any site or facility that accepts, aggregates, and/or stores used oil collected only from other used oil generation sites owned or operated by the owner or operator of the aggregation point, from which used oil is transported to the aggregation point in shipments of no more than 55 gallons under the provisions of Section 279.24(b). Used oil aggregation points may also accept used oil from household do-it-yourselfers.

(b) *Used oil aggregation point requirements.* Owners or operators of all used oil aggregation points must comply with the generator standards in subpart C of this part.

(e) 40 CFR 279.40 through 279.47 (Subpart E), "Standards for Used Oil Transporter and Transfer Facilities", have been incorporated by reference including subsequent amendments and editions.

SUBPART E -- STANDARDS FOR USED OIL TRANSPORTER AND TRANSFER FACILITIES

279.40 Applicability.

(a) **General.** Except as provided in paragraphs (a) (1) through (a)(4) of this section, this subpart applies to all used oil transporters. Used oil transporters are persons who transport used oil, persons who collect used oil from more than one generator and transport the collected oil, and owners and operators of used oil transfer facilities.
  (1) This subpart does not apply to on-site transportation.
  (2) This subpart does not apply to generators who transport shipments of used oil totalling 55 gallons or less from the generator to a used oil collection center as specified in Section 279.24(a).
  (3) This subpart does not apply to generators who transport shipments of used oil totalling 55 gallons or less from the generator to a used oil aggregation point owned or operated by the same generator as specified in Section 279.24(b).
  (4) This subpart does not apply to transportation of used oil from household do-it-yourselfers to a regulated used oil generator, collection center, aggregation point, processor/re-refiner, or burner subject to the requirements of this part. Except as provided in paragraphs (a)(1) through (a)(3) of this section, this subpart does, however, apply to transportation of collected household do-it-yourselfer used oil from regulated used oil generators, collection centers, aggregation points, or other facilities where household do-it-yourselfer used oil is collected.

(b) *Imports and exports.* Transporters who import used oil from abroad or export used oil outside of the United States are subject to the requirements of this subpart from the time the used oil enters and until the time it exits the United States.

(c) *Trucks used to transport hazardous waste.* Unless trucks previously used to transport hazardous waste are emptied as described in Section 261.7 of this chapter prior to transporting used oil, the used oil is considered to have been mixed with the hazardous waste and must be managed as hazardous waste unless, under the provisions of Section 279.10(b), the hazardous waste/used oil mixture is determined not to be hazardous waste.

(d) *Other applicable provisions.* Used oil transporters who conduct the following activities are also subject to other applicable provisions of this part as indicated in paragraphs (d)(1) through (5) of this section:
  (1) Transporters who generate used oil must also comply with subpart C of this part;
  (2) Transporters who process or re-refine used oil, except as provided in Section 279.41, must also comply with subpart F of this part;
  (3) Transporters who burn off-specification used oil for energy recovery must also comply with subpart G of this part;
  (4) Transporters who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in Section 279.11 must also comply with subpart H of this part; and
  (5) Transporters who dispose of used oil, including the use of used oil as a dust suppressant, must also comply with subpart I of this part.

279.41 Restrictions on transporters who are not also processors or re-refiners.

(a) Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation. However, except as provided in paragraph (b) of this section, used oil transporters may not process used oil unless they also comply with the requirements for processors/re-refiners in subpart F of this part.

(b) Transporters may conduct incidental processing operations that occur in the normal course of used oil transportation (e.g., settling and water separation), but that are not designed to produce (or make more amenable for production of) used oil derived products unless they also comply with the processor/re-refiner requirements in subpart F of this part.

(c) Transporters of used oil that is removed from oil bearing electrical transformers and turbines and filtered by the transporter or at a transfer facility prior to being returned to its original use are not subject to the processor/re-refiner requirements in subpart F of this part.

279.42 Notification.

(a) *Identification numbers.* Used oil transporters who have not previously complied with the notification requirements of RCRA section 3010 must comply with these requirements and obtain an EPA identification number.

(b) *Mechanics of notification.* A used oil transporter who has not received an EPA identification number may obtain one by notifying the Regional Administrator of their used oil activity by submitting either:

(1) A completed EPA Form 8700-12 (To obtain ordering information for EPA Form 8700-12 call RCRA/Superfund Hotline at 1-800-424-9346 or 703-920-9810); or

(2) A letter requesting an EPA identification number.
Call RCRA/Superfund Hotline to determine where to send a letter requesting an EPA identification number. The letter should include the following information:

(i) Transporter company name;
(ii) Owner of the transporter company;
(iii) Mailing address for the transporter;
(iv) Name and telephone number for the transporter point of contact;
(v) Type of transport activity (i.e., transport only, transport and transfer facility, transfer facility only);
(vi) Location of all transfer facilities at which used oil is stored;
(vii) Name and telephone number for a contact at each transfer facility.

279.43 Used oil transportation.

(a) *Deliveries.* A used oil transporter must deliver all used oil received to:

(1) Another used oil transporter, provided that the transporter has obtained an EPA identification number;
(2) A used oil processing/re-refining facility who has obtained an EPA identification number;
(3) An off-specification used oil burner facility who has obtained an EPA identification number; or
(4) An on-specification used oil burner facility.

(b) *DOT Requirements.* Used oil transporters must comply with all applicable requirements under the U.S. Department of Transportation regulations in 49 CFR parts 171 through 180. Persons transporting used oil that meets the definition of a hazardous material in 49 CFR 171.8 must comply with all applicable regulations in 49 CFR parts 171 through 180.

(c) *Used oil discharges.*

(1) In the event of a discharge of used oil during transportation, the transporter must take appropriate immediate action to protect human health and the environment (e.g., notify local authorities, dike the discharge area).

(2) If a discharge of used oil occurs during transportation and an official (State or local government or a Federal Agency) acting within the scope of official responsibilities determines that immediate removal of the used oil is necessary to protect human health or the environment, that official may authorize the removal of the used oil by transporters who do not have EPA identification numbers.

(3) An air, rail, highway, or water transporter who has discharged used oil must:

(i) Give notice, if required by 49 CFR 171.15 to the National Response Center (800-424-8802 or 202-426-2675); and

(ii) Report in writing as required by 49 CFR 171.16 to the Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, Department of Transportation, Washington, DC 20590.

(4) A water transporter who has discharged used oil must give notice as required by 33 CFR 153.203.

(5) A transporter must clean up any used oil discharged that occurs during transportation or take such action as may be required or approved by federal, state, or local officials so that the used oil discharge no longer presents a hazard to human health or the environment.

279.44 Rebuttable presumption for used oil.

(a) To ensure that used oil is not a hazardous waste under the rebuttable presumption of Section 279.10(b)(1)(ii), the used oil transporter must determine whether the halogen content of used oil being transported or stored at a transfer facility is above or below 1,000 ppm.

(b) The transporter must make this determination by:

(1) Testing the used oil; or
(2) Applying knowledge of the halogen content of the used oil in light of the materials or processes used.

(c) If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in subpart D of part 261 of this chapter. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Edition III, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Appendix VIII of part 261 of this chapter). EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. (202) 783-3238 (document number 955-001-00000-1).

(1) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement as described in Section 279.24(c), to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.

(2) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units if the CFC are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

(d) *Record retention.* Records of analyses conducted or information used to comply with paragraphs (a), (b), and (c) of this section must be maintained by the transporter for at least 3 years.

279.45 Used oil storage at transfer facilities.

Used oil transporters are subject to all applicable Spill Prevention, Control and Countermeasures (40 CFR part 112) in addition to the requirements of this subpart. Used oil transporters are also subject to the Underground Storage Tank (40 CFR part 280) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this subpart.

(a) *Applicability.* This section applies to used oil transfer facilities. Used oil transfer facilities are transportation related facilities including loading docks, parking areas, storage areas, and other areas where shipments of used oil are held for more than 24 hours during the normal course of transportation and not longer than 35 days. Transfer facilities that store used oil for more than 35 days are subject to regulation under subpart F of this chapter.

(b) *Storage units.* Owners or operators of used oil transfer facilities may not store used oil in units other than tanks, containers, or units subject to regulation under parts 264 or 265 of this chapter.

(c) *Condition of units.* Containers and aboveground tanks used to store used oil at transfer facilities must be:

(1) In good condition (no severe rusting, apparent structural defects or deterioration); and

(2) Not leaking (no visible leaks).

(d) *Secondary containment for containers.* Containers used to store used oil at transfer facilities must be equipped with a secondary containment system.

(1) The secondary containment system must consist of, at a minimum:

(i) Dikes, berms or retaining walls; and

(ii) A floor. The floor must cover the entire area within the dikes, berms, or retaining walls; or

(iii) An equivalent secondary containment system.

(2) The entire containment system, including walls and floors, 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) *Secondary containment for existing aboveground tanks.* Existing aboveground tanks used to store used oil at transfer facilities must be equipped with a secondary containment system.

(1) The secondary containment system must consist of, at a minimum:

(i) Dikes, berms or retaining walls; and

(ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or

(iii) An equivalent secondary containment system.

(2) The entire containment system, including walls and floors, 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) *Secondary containment for new aboveground tanks.* New aboveground tanks used to store used oil at transfer facilities must be equipped with a secondary containment system.

(1) The secondary containment system must consist of, at a minimum:

(i) Dikes, berms or retaining walls; and

(ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or

(iii) An equivalent secondary containment system.

(2) The entire containment system, including walls and floors, 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.

(g) *Labels.*

(1) Containers and aboveground tanks used to store used oil at transfer facilities must be labeled or marked clearly with the words (Used Oil."

(2) Fill pipes used to transfer used oil into underground storage tanks at transfer facilities must be labeled or marked clearly with the words "Used Oil."

(h) ***Response to releases.*** Upon detection of a release of used oil to the environment not subject to the requirements of part 280 subpart F which has occurred after the effective date of the authorized used oil program for the State in which the release is located, the owner/operator of a transfer facility must perform the following cleanup steps:

(1) Stop the release;

(2) Contain the release used oil;

(3) Clean up and manage properly the released used oil and other materials; and

(4) If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

279.46 Tracking

(a) *Acceptance.* Used oil transporters must keep a record of each used oil shipment accepted for transport. Records for each shipment must include:

(1) The name and address of the generator, transporter, or processor/re-refiner who provided the used oil for transport;

(2) The EPA identification number (if applicable) of the generator, transporter, or processor/re-refiner who provided the used oil for transport;

(3) The quantity of used oil accepted;

(4) The date of acceptance; and

(5) (i) Except as provided in paragraph (a)(5)(ii) of this section, the signature, dated upon receipt of the used oil, of a representative of the generator, transporter, or processor/re-refiner who provided the used oil for transport.

(ii) Intermediate rail transporters are not required to sign the record of acceptance.

(b) *Deliveries.* Used oil transporters must keep a record of each shipment of used oil that is delivered to another used oil transporter, or to a used oil burner, processor/re-refiner, or disposal facility. Records of each delivery must include:

(1) The name and address of the receiving facility or transporter;

(2) The EPA identification number of the receiving facility or transporter;

(3) The quantity of used oil delivered;

(4) The date of delivery;

(5) (i) Except as provided in paragraph (b)(5)(ii) of this section, the signature, dated upon receipt of the used oil, of a representative of the receiving facility or transporter.

(ii) Intermediate rail transporters are not required to sign the record of delivery.

(c) *Exports of used oil.* Used oil transporters must maintain the records described in paragraphs (b)(1) through (b)(4) of this section for each shipment of used oil exported to any foreign country.

(d) *Record retention.* The records described in paragraphs (a), (b), and (c) of this section must be maintained for at least three years.

279.47 Management of residues.

Transporters who generate residues from the storage or transport of used oil must manage the residues as specified in Section 279.10(e).

(f) 40 CFR 279.50 through 279.59 (Subpart F), "Standards for Used Oil Processors and Re-Refiners", have been incorporated by reference including subsequent amendments and editions.

SUBPART F - STANDARDS FOR USED OIL PROCESSORS AND RE-REFINERS

279.50 Applicability.

(a) The requirements of this subpart apply to owners and operators of facilities that process used oil. Processing means chemical or physical operations designed to produce from used oil, or to make used oil more amenable for production of, fuel oils, lubricants, or other used oil-derived products. Processing includes, but is not limited to: blending used oil with virgin petroleum products, blending used oils to meet the fuel specification, filtration, simple distillation, chemical or physical separation and re-refining. The requirements of this subpart do not apply to:
   (1) Transporters that conduct incidental processing operations that occur during the normal course of transportation as provided in Section 279.41; or
   (2) Burners that conduct incidental processing operations that occur during the normal course of used oil management prior to burning as provided in Section 279.61(b).

(b) *Other applicable provisions.* Used oil processors/re-refiners who conduct the following activities are also subject to the requirements of other applicable provisions of this part as indicated in paragraphs (b)(1) through (b)(5) of this section.
   (1) Processors/re-refiners who generate used oil must also comply with subpart C of this part;
   (2) Processors/re-refiners who transport used oil must also comply with subpart E of this part;
   (3) Except as provided in paragraphs (b)(3)(i) and (b)(3)(ii) of this section, processors/re-refiners who burn off-specification used oil for energy recovery must also comply with subpart G of this part. Processor/re-refiners burning used oil for energy recovery under the following conditions are not subject to subpart G of this part;
      (i) The used oil is burned in an on-site space heater that meets the requirements of Section 279.23; or
      (ii) The used oil is burned for purposes of processing used oil, which is considered burning incidentally to used oil processing;
   (4) Processors/re-refiners who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in Section 279.11 must also comply with subpart H of this part; and
   (5) Processors/re-refiners who dispose of used oil, including the use of used oil as a dust suppressant, also must comply with subpart I of this part.

279.51 Notification.

(a) *Identification numbers.* Used oil processors and re-refiners who have not previously complied with the notification requirements of RCRA section 3010 must comply with these requirements and obtain an EPA identification number.

(b) *Mechanics of notification.* A used oil processor or re-refiner who has not received an EPA identification number may obtain one by notifying the Regional Administrator of their used oil activity by submitting either:
   (1) A completed EPA Form 8700-12 (To obtain EPA Form 8700-12 call RCRA/Superfund Hotline at 1-800-424-9346 or 703-920-9810); or
   (2) A letter requesting an EPA identification number.
   Call RCRA/Superfund Hotline to determine where to send a letter requesting an EPA identification number. The letter should include the following information:
      (i) Processor or re-refiner company name;
      (ii) Owner of the processor or re-refiner company;
      (iii) Mailing address for the processor or re-refiner;
      (iv) Name and telephone number for the processor or re-refiner point of contact;
      (v) Type of used oil activity (i.e., process only, process and re-refine);
      (vi) Location of the processor or re-refiner facility.

279.52 General facility standards.

(a) *Preparedness and prevention.* Owners and operators of used oil processors and re-refiners facilities must comply with the following requirements:

(1) *Maintenance and operation of facility.* Facilities must be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of used oil to air, soil, or surface water which could threaten human health or the environment.

(2) *Required equipment.* All facilities must be equipped with the following, unless none of the hazards posed by used oil handled at the facility could require a particular kind of equipment specified in paragraphs (a)(2)(i) through (iv) of this section:

(i) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;

(ii) A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams;

(iii) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment and decontamination equipment; and

(iv) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

(3) *Testing and maintenance of equipment.* All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.

(4) *Access to communications or alarm system.*

(i) Whenever used oil is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in paragraph (a)(2) of this section.

(ii) If there is ever just one employee on the premises while the facility is operating, the employee must have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, unless such a device is not required in paragraph (a)(2) of this section.

(5) *Required aisle space.* The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.

(6) *Arrangements with local authorities.*

(i) The owner or operator must attempt to make the following arrangements, as appropriate for the type of used oil handled at the facility and the potential need for the services of these organizations:

(A) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of used oil handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility and possible evacuation routes;

(B) Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and specific fire department, and agreements with any others to provide support to the primary emergency authority;

(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 the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(ii) Where State or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.

(b) *Contingency plan and emergency procedures.* Owners and operators of used oil processors and re-refiners facilities must comply with the following requirements:

(1) *Purpose and implementation of contingency plan.*

(i) Each owner or operator must have a contingency plan for the facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of used oil to air, soil, or surface water.

(ii) The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release or used oil which could threaten human health or the environment.

(2) *Content of contingency plan.*

(i) The contingency plan must describe the actions facility personnel must take to comply with paragraphs (b)(1) and (6) of this section in response to fires, explosions, or any unplanned sudden or non-sudden release of used oil to air, soil, or surface water at the facility.

(ii) If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with part 112 of this chapter, or part 1510 of chapter V of this title, or some other emergency or contingency plan, the owner or operator need only amend that plan to incorporate used oil management provisions that are sufficient to comply with the requirements of this part.

(iii) The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services, pursuant to paragraph (a)(6) of this section.

(iv) The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see paragraph (b)(5) of this section), and this list must be kept up to date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.

(v) The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.

(vi) The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of used oil or fires).

(3) *Copies of contingency plan.* A copy of the contingency plan and all revisions to the plan must be:

(i) Maintained at the facility; and

(ii) Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.

(4) *Amendment of contingency plan.* The contingency plan must be reviewed, and immediately amended, if necessary, whenever:

(i) Applicable regulations are revised;

(ii) The plan fails in an emergency;

(iii) The facility changes--in its design, construction, operation, maintenance, or other circumstances--in a way that materially increases the potential for fires, explosions, or releases of used oil, or changes the response necessary in an emergency;

(iv) The list of emergency coordinators changes; or

(v) The list of emergency equipment changes.

(5) *Emergency coordinator.* At all times, there must be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristic of used oil handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

Guidance: The emergency coordinator's responsibilities are more fully spelled out in paragraph (b)(6) of this section. Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of used oil handled by the facility, and type and complexity of the facility.

(6) *Emergency procedures.*

(i) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or the designee when the emergency coordinator is on call) must immediately:

(A) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

(B) Notify appropriate State or local agencies with designated response roles if their help is needed.

(ii) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and a real extent of any released materials. He may do this by observation or review of facility records of manifests and, if necessary, by chemical analysts.

(iii) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-offs from water of chemical agents used to control fire and heat-induced explosions).

(iv) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he must report his findings as follows:

(A) If his assessment indicated that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated; and

(B) He must immediately notify either the government official designated as the on-scene coordinator for the geographical area (in the applicable regional contingency plan under part 1510 of this title), or the National Response Center (using their 24 hour-toll free number 800/424-8802). The report must include:

(1) Name and telephone number of reporter;
(2) Name and address of facility;
(3) Time and type of incident (e.g., release, fire);
(4) Name and quantity of material(s) involved, to the extent known;
(5) The extent of injuries, if any; and
(6) The possible hazards to human health, or the environment, outside the facility.

(v) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other used oil or hazardous waste at the facility. These measures must include, where applicable, stopping processes and operation, collecting and containing released used oil, and removing or isolating containers.

(vi) If the facility stops operation in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

(vii) Immediately after an emergency, the emergency coordinator must provide for recycling, storing, or disposing of recovered used oil, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

(viii) The emergency coordinator must ensure that, in the affected area(s) of the facility:

(A) 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

(B) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

(C) The owner or operator must notify the Regional Administrator, and appropriate State and local authorities that the facility is in compliance with paragraphs (b)(6)(viii) (A) and (B) of this section before operations are resumed in the affected area(s) of the facility.

(ix) The owner or operator must note in the operating record the time, date and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he must submit a written report on the incident to the Regional Administrator. The report must include:

(A) Name, address, and telephone number of the owner or operator;
(B) Name, address, and telephone number of the facility;
(C) Date, time, and type of incident (e.g., fire, explosion);
(D) Name and quantity of material(s) involved;
(E) The extent of injuries, if any;
(F) An assessment of actual or potential hazards to human health or the environment, where this is applicable;
(G) Estimated quantity and disposition of recovered material that resulted from the incident.

279.53 Rebuttable presumption for used oil.

(a) To ensure that used oil managed at a processing/re-refining facility is not hazardous waste under the rebuttable presumption of Section 279.10(b)(1)(ii), the owner or operator of a used oil processing/re-refining facility must determine whether the total halogen content of used oil managed at the facility is above or below 1,000 ppm.

(b) The owner or operator must make this determination by:
  (1) Testing the used oil; or
  (2) Applying knowledge of the halogen content of the used oil in light of the materials or processes used.

(c) If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in subpart D of part 261 of this chapter. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Edition III, to show that the used oil does not contain significant concentrations of halogenated hazardous constitutents listed in appendix VIII of part 261 of this chapter). EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburg, PA 15250-7954, (202) 783-3238 (document number 955-001-00000-1).
  (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. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.
  (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. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

279.54 Used oil management.

Used oil processor/re-refiners are subject to all applicable Spill Prevention, Control and Countermeasures (40 CFR part 112) in addition to the requirements of this subpart. Used oil processors/re-refiners are also subject to the Underground Storage Tank (40 CFR part 280) standards for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this subpart.

(a) *Management units.* Used oil processors/re-refiners may not store used oil in units other than tanks, containers, or units subject to regulation under part 264 or 265 of this chapter.

(b) *Condition of units.* Containers and aboveground tanks used to store or process used oil at processing and re-refining facilities must be:
  (1) In good condition (no severe rusting, apparent structural defects or deterioration); and
  (2) Not leaking (no visible leaks).

(c) *Secondary containment for containers.* Containers used to store or process used oil at processing and re-refining facilities must be equipped with a secondary containment system.
  (1) The secondary containment system must consist of, at a minimum:
    (i) Dikes, berms or retaining walls; and
    (ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or
    (iii) An equivalent secondary containment system.
  (2) The entire containment system, including walls and floor, 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) *Secondary containment for existing aboveground tanks.* Existing aboveground tanks used to store or process used oil at processing and re-refining facilities must be equipped with a secondary containment system.
  (1) The secondary containment system must consist of, at a minimum:
    (i) Dikes, berms or retaining walls; and
    (ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or
    (iii) An equivalent secondary containment system.
  (2) The entire containment system, including walls and floor, 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) *Secondary containment for new aboveground tanks.* New aboveground tanks used to store or process used oil at processing and re-refining facilities must be equipped with a secondary containment system.
  (1) The secondary containment system must consist of, at a minimum:
    (i) Dikes, berms or retaining walls; and

(ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or
(iii) An equivalent secondary containment system.

(2) The entire containment system, including walls and floor, 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) *Labels.*

(1) Containers and aboveground tanks used to store or process used oil at processing and re-refining facilities must be labeled or marked clearly with the words "Used Oil."

(2) Fill pipes used to transfer used oil into underground storage tanks at processing and re-refining facilities must be labeled or marked clearly with the words "Used Oil."

(g) *Response to releases.* Upon detection of a release of used oil to the environment not subject to the requirements of part 280, subpart F of this chapter which has occurred after the effective date of the authorized used oil program for the State in which the release is located, an owner/operator must perform the following cleanup steps:

(1) Stop the release;
(2) Contain the released used oil
(3) Clean up and manage properly the released used oil and other materials; and
(4) If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

(h) *Closure.*

(1) Aboveground tanks. Owners and operators who store or process used oil in aboveground tanks must comply with the following requirements:

(i) At closure of a tank system, the owner or operator must remove or decontaminate used oil residues in tanks, contaminated containment system components, contaminated soils, and structures and equipment contaminated with used oil, and manage them as hazardous waste, unless the materials are not hazardous waste under this chapter.

(ii) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in paragraph (h)(1)(i) of this section, then the owner or operator must close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to hazardous waste landfills (Section 265.310 of this chapter).

(2) *Containers.* Owners and operators who store used oil in containers must comply with the following requirements:

(i) At closure, containers holding used oils or residues of used oil must be removed from the site;
(ii) The owner or operator must remove or decontaminate used oil residues, contaminated containment system components, contaminated soils, and structures and equipment contaminated with used oil, and manage them as hazardous waste, unless the materials are not hazardous waste under part 261 of this chapter.

279.55 Analysis plan.

Owners or operators of used oil processing and re-refining facilities must develop and follow a written analysis plan describing the procedures that will be used to comply with the analysis requirements of Section 279.53 and, if applicable, Section 279.72. The owner or operator must keep the plan at the facility.

(a) *Rebuttable presumption for used oil in Section 279.53.* At a minimum, the plan must specify the following:

(1) Whether sample analyses or knowledge of the halogen content of the used oil will be used to make this determination.

(2) If sample analyses are used to make this determination:

(i) The sampling method used to obtain representative samples to be analyzed. A representative sample may be obtained using either:
(A) One of the sampling methods in appendix I of part 261 of this chapter; or
(B) A method shown to be equivalent under Sections 260.20 and 260.21 of this chapter;
(ii) The frequency of sampling to be performed, and whether the analysis will be performed on-site or off-site; and
(iii) The methods used to analyze used oil for the parameters specified in Section 279.53; and

(3) The type of information that will be used to determine the halogen content of the used oil.

(b) *On-specification used oil fuel in Section 279.72.* At a minimum, the plan must specify the following if Section 279.72 is applicable;

(1) Whether sample analyses or other information will be used to make this determination;
(2) If sample analyses are used to make this determination:

(i) The sampling method used to obtain representative samples to be analyzed. A representative sample may be obtained using either:
(A) One of the sampling methods in appendix I of part 261 of this chapter; or
(B) A method shown to be equivalent under Section 260.20 and 260.21 of this chapter;
(ii) Whether used oil will be sampled and analyzed prior to or after any processing/re-refining:
(iii) The frequency of sampling to be performed, and whether the analysis will be performed on-site or off-site; and
(iv) The methods used to analyze used oil for the parameters specified in Section 279.72; and
(3) The type of information that will be used to make the on-specification used oil fuel determination.

279.56 Tracking

(a) *Acceptance.* 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 documents. Records for each shipment must include the following information:
(1) The name and address of the transporter who delivered the used oil to the processor/re-refiner;
(2) The name and address of the generator or processor/re-refining from whom the used oil was sent for processing/re-refining;
(3) The EPA identification number of the transporter who delivered the used oil to the processor/re-refiner;
(4) The EPA identification number (if applicable) of the generator or processor/re-refiner from whom the used oil was sent for processing/re-refining;
(5) The quantity of used oil accepted; and
(6) The date of acceptance.
(b) *Delivery.* Used oil processor/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 documents. Records for each shipment must include the following information:
(1) The name and address of the transporter who delivers the used oil to the burner, processor/re-refiner or disposal facility;
(2) The name and address of the burner, processor/re-refiner or disposal facility who will receive the used oil;
(3) The EPA identification number of the transporter who delivers the used oil to the burner, processor/re-refiner or disposal facility;
(4) The EPA identification number of the burner, processor/re-refiner, or disposal facility who will receive the used oil;
(5) The quantity of used oil shipped; and
(6) The date of shipment.
(c) *Record retention.* The records described in paragraphs (a) and (b) of this section must be maintained for at least three years.

279.57 Operating record and reporting.

(a) *Operating record.*
(1) The owner or operator must keep a written operating record at the facility.
(2) The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility;
(i) Records and results of used oil analyses performed as described in the analysis plan required under Section 279.55; and
(ii) Summary reports and details of all incidents that require implementation of the contingency plan as specified in Section 279.52(b).
(b) *Reporting.* A used oil processor/re-refiner must report to the Regional Administrator, in the form of a letter, on a biennial basis (by March 1 of each even numbered year), the following information concerning used oil activities during the previous calendar year;

(1) The EPA identification number, name, and address of the processor/re-refiner;
(2) The calendar year covered by the report; and
(3) The quantities of used oil accepted for processing/re-refining and the manner in which the used oil is processed/re-refined, including the specific processes employed.

279.58 Off-site shipments 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 identification number.

279.59 Management of residues.

Owners and operators who generate residues from the storage, processing, or re-refining of used oil must manage the residues as specified in Section 279.10(e).

(g) 40 CFR 279.60 through 279.67 (Subpart G), "Standards for Used Oil Burners Who Burn Off-Specification Used Oil for Energy Recovery", have been incorporated by reference including subsequent amendments and editions.

SUBPART G -- STANDARDS FOR USED OIL BURNERS WHO BURN OFF-SPECIFICATION USED OIL FOR ENERGY RECOVERY

279.60 Applicability.

(a) *General.* The requirements of this subpart apply to used oil burners except as specified in paragraphs (a)(1) and (a)(2) of this section. A used oil burner is a facility where used oil not meeting the specification requirements in Section 279.11 is burned for energy recovery in devices identified in Section 279.61(a). Facilities burning used oil for energy recovery under the following conditions are not subject to this Subpart:
  (1) The used oil is burned by the generator in an on-site space heater under the provisions of Section 279.23; or
  (2) The used oil is burned by a processor/re-refiner for purposes of processing used oil, which is considered burning incidentally to used oil processing.

(b) *Other applicable provisions.* Used oil burners who conduct the following activities are also subject to the requirements of other applicable provisions of this part as indicated below.
  (1) Burners who generate used oil must also comply with subpart C of this part;
  (2) Burners who transport used oil must also comply with subpart E of this part;
  (3) Except as provided in Section 279.61(b), burners who process or re-refine used oil must also comply with subpart F of this part;
  (4) Burners who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in Section 279.11 must also comply with subpart H of this part; and
  (5) Burners who dispose of used oil, including the use of used oil as a dust suppressant, must comply with subpart I of this part.

(c) *Specification fuel.* This subpart does not apply to persons burning used oil that meets the used oil fuel specification of Section 279.11, provided that the burner complies with the requirements of subpart H of this part.

279.61 Restrictions on burning.

(a) Off-specification used oil fuel may be burned for energy recovery in only the following devices;
  (1) Industrial furnaces identified in Section 260.10 of this chapter;
  (2) Boilers, as defined in Section 260.10 of this chapter, that are identified as follows:
    (i) Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes;
    (ii) Utility boilers used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale; or
    (iii) Used oil-fired space heaters provided that the burner meets the provisions of Section 279.23; or
  (3) Hazardous waste incinerators subject to regulation under subpart O of parts 264 or 265 of this chapter.

(b) (1) With the following exception, used oil burners may not process used oil unless they also comply with the requirements of subpart F of this part.
  (2) Used oil burners may aggregate off-specification used oil with virgin oil or on-specification used oil for purposes of burning, but may not aggregate for purposes of producing on-specification used oil.

279.62 Notification

(a) *Identification numbers.* Used oil burners which have not previously complied with the notification requirements of RCRA section 3010 must comply with these requirements and obtain an EPA identification number.

(b) *Mechanics of notification.* A used oil burner who has not received an EPA identification number may obtain one by notifying the Regional Administrator of their used oil activity by submitting either:

(1) A completed EPA Form 8700-12 (To obtain EPA Form 8700-12 call RCRA/Superfund Hotline at 1-800-424-9346 or 703-920-9810); or

(2) A letter requesting an EPA identification number. Call the RCRA/Superfund Hotline to determine where to send a letter requesting an EPA identification number. The letter should include the following information:

(i) Burner company name;
(ii) Owner of the burner company;
(iii) Mailing address for the burner;
(iv) Name and telephone number for the burner point of contact;
(v) Type of used oil activity; and
(vi) Location of the burner facility.

279.63 Rebuttable presumption for used oil.

(a) To ensure that used oil managed at a used oil burner facility is not hazardous waste under the rebuttable presumption of Section 279.10(b)(1)(ii), a used oil burner must determine whether the total halogen content of used oil managed at the facility is above or below 1,000 ppm.

(b) the used oil burner 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; or
(3) If the used oil has been received from a processor/refiner subject to regulation under subpart F of this part, using information provided by the processor/re-refiner.

(c) If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste/because it has been mixed with halogenated hazardous waste listed in subpart D of part 261 of this chapter. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by using an analytical method from SW-846, Edition III, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix VIII of part 261 of the chapter). EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. 202-783-3238 (document number 955-001-00000-1).
(1) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement. as described in Section 279.24(c), to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.
(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. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

(d) *Record retention.* Records of analyses conducted or information used to comply with paragraphs (a),(b), and (c) of this section must be maintained by the burner for at least 3 years.

279.64 Used oil storage.

Used oil burners are subject to all applicable Spill Prevention, Control and Countermeasures (40 CFR part 112) in addition to the requirements of 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 whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this subpart.

(a) *Storage units.* Used oil burners may not store used oil in units other than tanks, containers, or units subject to regulation under parts 264 or 265 of this chapter.

(b) *Condition of units.* Containers and aboveground tanks used to store oil at burner facilities must be:
(1) In good condition (no severe rusting, apparent structural defects or deterioration); and
(2) Not leaking (no visible leaks).

(c) *Secondary containment for containers.* Containers used to store used oil at burner facilities must be equipped with a secondary containment system.
(1) The secondary containment system must consist of, at a minimum:
(i) Dikes, berms or retaining walls; and
(ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall.

(2) The entire containment system, including walls and floor, 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) *Secondary containment for existing aboveground tanks.* Existing aboveground tanks used to store used oil at burner facilities must be equipped with a secondary containment system.

(1) The secondary containment system must consist of, at a minimum:

(i) Dikes, berms or retaining walls; and

(ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or

(iii) An equivalent secondary containment system.

(2) The entire containment system, including walls and floor, 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) *Secondary containment for existing aboveground tanks.* New aboveground tanks used to store used oil at burner facilities must be equipped with a secondary containment system.

(1) The secondary containment system must consist of, at a minimum:

(i) Dikes, berms or retaining walls; and

(ii) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or

(iii) An equivalent secondary containment system.

(2) The entire containment system, including walls and floor, 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) *Labels.*

(1) Containers and aboveground tanks used to store used oil at burner facilities must be labeled or marked clearly with the words "Used Oil."

(2) Fill pipes used to transfer used oil into underground storage tanks at burner facilities must be labeled or marked clearly with the words "Used Oil."

(g) *Response to releases.* Upon detection of a release of used oil to the environment not subject to the requirements of part 280 subpart F which has occurred after the effective date of the authorized used oil program for the State in which the release is located, a burner must perform the following cleanup steps:

(1) Stop the release;

(2) Contain the released used oil;

(3) Clean up and manage properly the released used oil and other materials; and

(4) If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

279.65 Tracking.

(a) *Acceptance.* 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 documents. Records for each shipment must include the following information:

(1) The name and address of the transporter who delivered the used oil to the burner;

(2) The name and address of the generator or processor/re-refiner from whom the used oil was sent to the burner;

(3) The EPA identification number of the transporter who delivered the used oil to the burner;

(4) The EPA identification number (if applicable) of the generator or processor/re-refiner from whom the used oil was sent to the burner;

(5) The quantity of used oil accepted; and

(6) The date of acceptance.

(b) *Record retention.* The records described in paragraph (a) of this section must be maintained for at least three years.

279.66 Notices.

(a) *Certification.* Before a burner accepts the first shipment of off-specification 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:

(1) The burner has notified EPA stating the location and general description of his used oil management activities; and

(2) The burner will burn the used oil only in an industrial furnace or boiler identified in Section 279.61(a).

(b) *Certification retention.* The certification described in paragraph (a) of this section must be maintained for three years from the date the burner last receives shipment of off-specification used oil from that generator, transporter, or processor/re-refiner.

279.67 Management of residues.

Burners who generate residues from the storage or burning of used oil must manage the residues as specified in Section 279.10(e).

(h) 40 CFR 279.70 through 279.75 (Subpart H), "Standards for Used Oil Fuel Marketers", have been incorporated by reference including subsequent amendments and editions.

SUBPART H - STANDARDS FOR USED OIL FUEL MARKETERS

279.70 Applicability.

(a) Any person who conducts either of the following activities is subject to the requirements of this subpart:
  (1) Directs a shipment of off-specification used oil from their facility to a used oil burner; or
  (2) First claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in Section 279.11.

(b) The following persons are not marketers subject to this subpart;
  (1) Used oil generators, and 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. However, processors/re-refiners who burn some used oil fuel for purposes of processing are considered to be burning incidentally to processing. Thus, generators and transporters who direct shipments of off-specification used oil to processor/re-refiners who incidently burn used oil are not marketers subject to this Subpart;
  (2) Persons who direct shipments of on-specification used oil and who are not the first person to claim the oil meets the used oil fuel specifications of Section 279.11.

(c) Any person subject to the requirements of this Subpart must also comply with one of the following:
  (1) Subpart C of this part--Standards for Used Oil Generators;
  (2) Subpart E of this part--Standards for Used Oil Transporters and Transfer Facilities;
  (3) Subpart F of this part--Standards for used Oil Processors and Re-refiners; or
  (4) Subpart G of this part--Standards for Used Oil Burners who Burn Off-Specification Used Oil for Energy Recovery.

279.71 Prohibitions.

A used oil fuel marketer may initiate a shipment of off-specification used oil only to a used oil burner who:
(a) Has an EPA identification number; and
(b) Burns the used oil in an industrial furnace or boiler identified in Section 279.61(a).

279.72 On-specification used oil fuel.

(a) *Analysis of used oil fuel.* A generator, transporter, processor/re-refiner, or burner may determine that used oil that is to be burned for energy recovery meets the fuel specifications of Section 279.11 by performing analyses or obtaining copies of analyses or other information documenting that the used oil fuel meets the specifications.
(b) *Record retention.* A generator, transporter, processor/re-refiner, or burner who first claims that used oil that is to be burned for energy recovery meets the specifications for used oil fuel under Section 279.11, must keep copies of analyses of the used oil (or other information used to make the determination) for three years.

279.73 Notification.

(a) *Identification numbers.* A used oil fuel marketer subject to the requirements of this subpart who has not previously complied with the notification requirements of RCRA section 3010 must comply with these requirements and obtain an EPA identification number.
(b) A marketer who has not received an EPA identification number may obtain one by notifying the Regional Administrator of their used oil activity by submitting either;
  (1) A completed EPA Form 8700-12; or
  (2) A letter requesting an EPA identification number. The letter should include the following information;
    (i) Marketer company name;
    (ii) Owner of the marketer;

(iii) Mailing address for the marketer;
(iv) Name and telephone number for the marketer point of contact; and
(v) Type of used oil activity (i.e., generator directing shipments of off-specification used oil to a burner).

279.74 Tracking.

(a) *Off-specification used oil delivery.* Any used oil marketer who directs a shipment of off-specification used oil to a burner must keep a record of each shipment of used oil to a used oil burner. These records may take the form of a log, invoice, manifest, bill of lading or other shipping documents. Records for each shipment must include the following information;
(1) The name and address of the transporter who delivers the used oil to the burner;
(2) The name and address of the burner who will receive the used oil;
(3) The EPA identification number of the transporter who delivers the used oil to the burner;
(4) The EPA identification number of the burner;
(5) The quantity of used oil shipped; and
(6) The date of shipment.

(b) *On-specification used oil delivery.* A generator, transporter, processor/re-refiner, or burner who first claims that used oil that is to be burned for energy recovery meets the fuel specifications under Section 279.11 must keep a record of each shipment of used oil to an on-specification used oil burner. Records for each shipment must include the following information;
(1) The name and address of the facility receiving the shipment;
(2) The quantity of used oil fuel delivered;
(3) The date of shipment or delivery; and
(4) A cross-reference to the record of used oil analysis or other information used to make the determination that the oil meets the specification as required under Section 279.72(a).

(c) *Record retention.* The records described in paragraphs (a) and (b) of this section must be maintained for at least three years.

279.75 Notices.

(a) *Certification.* Before a used oil generator, transporter, or processor/re-refiner directs the first shipment of off-specification used oil fuel to a burner, he must obtain a one-time written and signed notice from the burner certifying that:
(1) The burner has notified EPA stating the location and general description of used oil management activities; and
(2) The burner will burn the off-specification used oil only in an industrial furnace or boiler identified in Section 279.61(a).

(b) *Certification retention.* The certification described in paragraph (a) of this section must be maintained for three years from the date the last shipment of off-specification used oil is shipped to the burner.

(i) 40 CFR 279.80 through 279.81 (Subpart I), "Standards for Use as a Dust Suppressant and Disposal of Used Oil" have been incorporated by reference including subsequent amendments and editions. {Note: 40 CFR 279.82, which addresses used oil as a dust suppressant, is specifically not incorporated by reference. See also G.S.130A-309.15 for prohibited acts regarding used oil}.

SUBPART I - STANDARDS FOR USE AS A DUST SUPPRESSANT AND DISPOSAL OF USED OIL

279.80 Applicability.

The requirements of this subpart apply to all used oils that cannot be recycled and are therefore being disposed.

279.81 Disposal.

(a) *Disposal of hazardous used oils.* Used oils that are identified as a hazardous waste and cannot be recycled in accordance with this part must be managed in accordance with the hazardous waste management requirements of parts 260 through 266, 268, 270 and 124 of this chapter.

(b) *Disposal of nonhazardous used oils.* Used oils that are not hazardous wastes and cannot be recycled under this part must be disposed in accordance with the requirements of parts 257 and 258 of this chapter.

(j) Additional State Requirements.

(1) By July 1 of each year the following persons shall notify the Department by submitting an annual report listing the type and quantity of used oil transported, collected, and recycled during the preceding calendar year, on Department forms:

(A) Persons transporting more than 500 gallons of used oil per week over public highways.

(B) Collection facilities that annually receive more than 6,000 gallons of used oil excluding the volume of used oil collected from individuals that change their own personal motor oil.

(C) Facilities that annually recycle more than 10,000 gallons of used oil.

(D) Public used oil collection centers.

(2) The following persons are not required to comply with 15A NCAC 13A .0018(j)(1):

(A) An electric utility that generates used oil which is reclaimed, recycled, or re-refined on-site for use in its operations.

(B) An on-site burner that burns its own on-specification used oil provided that the facility is in compliance with any Air Quality permit requirements established by the Department.

(3) An annual fee of twenty five dollars ($25.00) shall be paid by all persons identified in 15A NCAC 13A .0018(j)(1)(A)-(C) by July 1 of each year.

History Note: Statutory Authority G.S. 130A-294(b),(c);
150B-21.6;
Eff. October 1, 1993;
Recodified from 15A NCAC 13A .0018 Eff. December 20, 1996.

.0119 STANDARDS FOR UNIVERSAL WASTE MANAGEMENT - PART 273

(a) 40 CFR 273.1 through 273.5 (Subpart A), "General" are incorporated by reference including subsequent amendments and editions.

SUBPART A -- GENERAL

§ 273.1 Scope.

(a) This part establishes requirements for managing the following:
  (1) Batteries as described in 40 CFR 273.2;
  (2) Pesticides as described in 40 CFR 273.3; and
  (3) Thermostats as described in 40 CFR 273.4.
(b) This part provides an alternative set of management standards in lieu of regulation under 40 CFR parts 260 through 272.

§ 273.2 Applicability -- batteries.

(a) *Batteries covered under 40 CFR part 273.*
  (1) The requirements of this part apply to persons managing batteries, as described in section 273.6, except those listed in paragraph (b) of this section.
  (2) Spent lead-acid batteries which are not managed under 40 CFR part 266, subpart G, are subject to management under this part.
(b) *Batteries not covered under 40 CFR part 273.*
  The requirements of this part do not apply to persons managing the following batteries:
  (1) Spent lead-acid batteries that are managed under 40 CFR part 266, subpart G.
  (2) Batteries, as described in section 273.6, that are not yet wastes under part 261 of this chapter, including those that do not meet the criteria for waste generation in paragraph (c) of this section.
  (3) Batteries, as described in section 273.6 of this part, that are not hazardous waste. A battery is a hazardous waste if it exhibits one or more of the characteristics identified in 40 CFR part 261, subpart C.
(c) *Generation of waste batteries.*
  (1) A used battery becomes a waste on the date it is discarded (e.g., when sent for reclamation).
  (2) An unused battery becomes a waste on the date the handler decides to discard it.

§ 273.3 Applicability - pesticides.

(a) *Pesticides covered under 40 CFR part 273.* The requirements of this part apply to persons managing pesticides, as described in section 273.6, meeting the following conditions, except those listed in paragraph (b) of this section:
  (1) Recalled pesticides that are:
    (i) Stocks of a suspended and canceled pesticide that are part of a voluntary or mandatory recall under FIFRA Section 19(b), including, but not limited to those owned by the registrant responsible for conducting the recall; or
    (ii) Stocks of a suspended or cancelled pesticide, or a pesticide that is not in compliance with FIFRA, that are part of a voluntary recall by the registrant.
  (2) Stocks of other unused pesticide products that are collected and managed as part of a waste pesticide collection program.
(b) *Pesticides not covered under 40 CFR part 273.*
  The requirements of this part do not apply to persons managing the following pesticides:
  (1) Recalled pesticides described in paragraph (a)(1) of this section, and unused pesticide products described in paragraph (a)(2) of this section, that are managed by farmers in compliance with 40 CFR 262.70. (40 CFR 262.70 addresses pesticides disposed of on the farmer's own farm in a manner consistent with the disposal instructions on the pesticide label, providing the container is triple rinsed in accordance with 40 CFR 261.7(b)(3));

(2) Pesticides not meeting the conditions set forth in paragraph (a) of this section. These pesticides must be managed in compliance with the hazardous waste regulations in 40 CFR parts 260 through 272;
(3) Pesticides that are not wastes under part 261 of this chapter, including those that do not meet the criteria for waste generation in paragraph (c) of this section or those that are not wastes as described in paragraph (d) of this section; and
(4) Pesticides that are not hazardous waste. A pesticide is a hazardous waste if it is listed in 40 CFR part 261, subpart D or if it exhibits one or more of the characteristics identified in 40 CFR part 261, subpart C.

(c) *When a pesticide becomes a waste.*
(1) A recalled pesticide described in paragraph (a)(1) of this section becomes a waste on the first date on which both of the following conditions apply:
(i) The generator of the recalled pesticide agrees to participate in the recall; and
(ii) The person conducting the recall decides to discard (e.g., burn the pesticide for energy recovery).
(2) An unused pesticide product described in paragraph (a)(2) of this section becomes a waste on the date the generator decides to discard it.

(d) *Pesticides that are not wastes.* The following pesticides are not wastes:
(1) Recalled pesticides described in paragraph (a)(1) of this section, provided that the person conducting the recall:
(i) has not made a decision to discard (e.g., burn for energy recovery) the pesticide. Until such a decision is made, the pesticide does not meet the definition of "solid waste" under 40 CFR 261.2; thus the pesticide is not a hazardous waste and is not subject to hazardous waste requirements, including part 273 of this chapter. This pesticide remains subject to the requirements of FIFRA; or
(ii) has made a decision to use a management option that, under 40 CFR 261.2, does not cause the pesticide to be a solid waste (i.e., the selected option is use (other than use constituting disposal) or reuse (other than burning for energy recovery), or reclamation). Such a pesticide is not a solid waste and therefore is not a hazardous waste, and is not subject to the hazardous waste requirements including part 273 of this chapter. This pesticide, including a recalled pesticide that is exported to a foreign destination for use or reuse, remains subject to the requirements of FIFRA.
(2) Unused pesticide products described in paragraph (a)(2) of this section, if the generator of the unused pesticide product has not decided to discard (e.g., burn for energy recovery) them. These pesticides remain subject to the requirements of FIFRA.

§ 273.4 Applicability -- mercury thermostats.

(a) *Thermostats covered under 40 CFR part 273.* The requirements of this part apply to persons managing thermostats, as described in section 273.6, except those listed in paragraph (b) of this section.
(b) *Thermostats not covered under 40 CFR part 273.* The requirements of this part do not apply to persons managing the following thermostats:
(1) Thermostats that are not yet wastes under part 261 of this chapter. Paragraph (c) of this section describes when thermostats become wastes.
(2) Thermostats that are not hazardous waste. A thermostat is a hazardous waste if it exhibits one or more of the characteristics identified in 40 CFR part 261, subpart C.
(c) *Generation of waste thermostats.*
(1) A used thermostat becomes a waste on the date it is discarded (e.g., sent for reclamation).
(2) An unused thermostat becomes a waste on the date the handler decides to discard it.

§ 273.5 Applicability -- household and conditionally exempt small quantity generator waste.

(a) Persons managing the wastes listed below may, at their option, manage them under the requirements of this part:
(1) Household wastes that are exempt under 40 CFR 261.4(b)(1) and are also of the same type as the universal wastes defined at 40 CFR 273.6; and/or
(2) Conditionally exempt small quantity generator wastes that are exempt under 40 CFR 261.5 and are also of the same type as the universal wastes defined at 40 CFR 273.6.
(b) Persons who commingle the wastes described in paragraphs (a)(1) and (a)(2) above together with universal waste regulated under this part must manage the commingled waste under the requirements of this part.

[Note: 40 CFR 273.6 was not incorporated by reference. The Federal definitions can be found at 40 CFR 273.6].

(b) 40 CFR 273.10 through 273.20 (Subpart B), "Standards for Small Quantity Handlers of Universal Waste" are incorporated by reference including subsequent amendments and editions.

SUBPART B -- STANDARDS FOR SMALL QUANTITY HANDLERS OF UNIVERSAL WASTE

§ 273.10 Applicability.

This subpart applies to small quantity handlers of universal waste (as defined in 40 CFR 273.6).

§ 273.11 Prohibitions.

A small quantity handler of universal waste is:

(a) Prohibited from disposing of universal waste; and
(b) Prohibited from diluting or treating universal waste, except by responding to releases as provided in 40 CFR 273.17; or by managing specific wastes as provided in 40 CFR 273.13.

§ 273.12 Notification.

A small quantity handler of universal waste is not required to notify EPA of universal waste handling activities.

§ 273.13 Waste management.

(a) *Universal waste batteries:* A small quantity handler of universal waste must manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:
  (1) A small quantity handler of universal waste must contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the battery, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
  (2) A small quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):
    (i) Sorting batteries by type;
    (ii) Mixing battery types in one container;
    (iii) Discharging batteries so as to remove the electric charge;
    (iv) Regenerating used batteries;
    (v) Disassembling batteries or battery packs into individual batteries or cells;
    (vi) Removing batteries from consumer products; or
    (vii) Removing electrolyte from batteries.
  (3) A small quantity handler of universal waste who removes electrolyte from batteries, or who generates other solid waste (e.g., battery pack materials, discarded consumer products) as a result of the activities listed above, must determine whether the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste identified in 40 CFR part 261, subpart C.
    (i) If the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste, it is subject to all applicable requirements of 40 CFR parts 260 through 272. The handler is considered the generator of the hazardous electrolyte and/or other waste and is subject to 40 CFR part 262.
    (ii) If the electrolyte or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.
(b) *Universal waste pesticides.* A small quantity handler of universal waste must manage universal waste pesticides in a way that prevent releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more of the following:

(1) A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; or
(2) A container that does not meet the requirements of paragraph (b)(1) of this Section, provided that the unacceptable container is overpacked in a container that does meet the requirements of paragraph (b)(1) of this Section; or
(3) A tank that meets the requirements of 40 CFR part 265 subpart J, except for 40 CFR 265.197(c), 265.200, and 265.201; or
(4) A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(c) *Universal waste thermostats:* A small quantity handler of universal waste must manage universal waste thermostats in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:
(1) A small quantity handler of universal waste must contain any universal waste thermostat that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the thermostat, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
(2) A small quantity handler of universal waste may remove mercury-containing ampules from universal waste thermostats provided the handler:
(i) Removes the ampules in a manner designed to prevent breakage of the ampules;
(ii) Removes ampules only over or in a containment device (e.g., tray or pan sufficient to collect and contain any mercury released from an ampule in case of breakage);
(iii) Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules, from the containment device to a container that meets the requirements of 40 CFR 262.34;
(iv) Immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of 40 CFR 262.34;
(v) Ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;
(vi) Ensures that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;
(vii) Stores removed ampules in closed, non-leaking containers that are in good condition;
(viii) Packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation; and
(3) (i) A small quantity handler of universal waste who removes mercury-containing ampules from thermostats must determine whether the following exhibit a characteristic of hazardous waste identified in 40 CFR part 261, subpart C:
(A) Mercury or clean-up residues resulting from spills or leaks; and/or
(B) Other solid waste generated as a result of the removal of mercury-containing ampules (e.g., remaining thermostat units).
(ii) If the mercury, residues, and/or other solid waste exhibit a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of 40 CFR parts 260 through 272. The handler is considered the generator of the mercury, residues, and/or other waste and must manage it is subject to 40 CFR part 262.
(iii) If the mercury, residues, and/or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

§ 273.14 Labeling/marking.

A small quantity handler of universal waste must label or mark the universal waste to identify the type of universal waste as specified below:
(a) Universal waste batteries (i.e., each battery), or a container in which the batteries are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Battery(ies), or "Waste Battery(ies)," or "Used Battery(ies);"
(b) A container, (or multiple container package unit), tank, transport vehicle or vessel in which recalled universal waste pesticides as described in 40 CFR 273.3(a)(1) are contained must be labeled or marked clearly with:
(1) The label that was on or accompanied the product as sold or distributed; and
(2) The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s);"

(c) A container, tank, or transport vehicle or vessel in which unused pesticide products as described in 40 CFR 273.3(a)(2) are contained must be labeled or marked clearly with:
  (1) (i) The label that was on the product when purchased, if still legible;
  (ii) If using the labels described in paragraph (1)(I) of this section is not feasible, the appropriate label as required under the Department of Transportation regulation 49 CFR part 172;
  (iii) If using the labels described in paragraphs (1)(i) and (ii) of this section is not feasible, another label prescribed or designated by the waste pesticide collection program administered or recognized by a state; and
  (2) The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s)."

(d) Universal waste thermostats (i.e., each thermostat), or a container in which the thermostats are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Mercury Thermostat(s)," or "Waste Mercury Thermostat(s)," or "Used Mercury Thermostat(s)".

§ 273.15 Accumulation time limits.

(a) A small quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of paragraph (b) of this section are met.

(b) A small quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.

(c) A small quantity handler of universal waste who accumulates universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:
  (1) Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;
  (2) Marking or labeling each individual item of universal waste (e.g., each battery or thermostat) with the date it became a waste or was received;
  (3) Maintaining an inventory system on-site that identifies the date each universal waste became a waste or was received;
  (4) Maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;
  (5) Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received; or
  (6) Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

§ 273.16 Employee training.

A small quantity handler of universal waste must inform all employees who handle or have responsibility for managing universal waste. The information must describe proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the facility.

§ 273.17 Response to releases.

(a) A small quantity handler of universal waste must immediately contain all releases of universal wastes and other residues from universal wastes.

(b) A small quantity handler of universal waste must determine whether any material resulting from the release is hazardous waste, and if so, must manage the hazardous waste in compliance with all applicable requirements of 40 CFR parts 260 through 272. The handler is considered the generator of the material resulting from the release, and must manage it in compliance with 40 CFR part 262.

§ 273.18 Off-site shipments.

(a) A small quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.
(b) If a small quantity handler of universal waste self-transports universal waste off-site, the handler becomes a universal waste transporter for those self-transportation activities and must comply with the transporter requirements of subpart D of this part while transporting the universal waste.
(c) If a universal waste being offered for off-site transportation meets the definition of hazardous materials under 49 CFR 171 through 180, a small quantity handler of universal waste must package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with the applicable Department of Transportation regulations under 49 CFR parts 172 through 180;
(d) Prior to sending a shipment of universal waste to another universal waste handler, the originating handler must ensure that the receiving handler agrees to receive the shipment.
(e) If a small quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler must either:
    (1) Receive the waste back when notified that the shipment has been rejected, or
    (2) Agree with the receiving handler on a destination facility to which the shipment will be sent.
(f) A small quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that he has received from another handler. If a handler rejects a shipment or a portion of a shipment, he must contact the originating handler to notify him of the rejection and to discuss reshipment of the load. The handler must:
    (1) Send the shipment back to the originating handler, or
    (2) If agreed to by both the originating and receiving handler, send the shipment to a destination facility.
(g) If a small quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler must immediately notify the appropriate regional EPA office of the illegal shipment, and provide the name, address, and phone number of the originating shipper. The EPA regional office will provide instructions for managing the hazardous waste.
(h) If a small quantity handler of universal waste receives a shipment of non-hazardous, non-universal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

§ 273.19 Tracking universal waste shipments.

A small quantity handler of universal waste is not required to keep records of shipments of universal waste.

§ 273.20 Exports.

A small quantity handler of universal waste who sends universal waste to a foreign destination other than to those OECD countries specified in 40 CFR 262.58(a)(1) (in which case the handler is subject to the requirements of 40 CFR part 262, subpart H) must:
(a) Comply with the requirements applicable to a primary exporter in 40 CFR 262.53, 262.56(a)(1) through (4), (6), and (b) and 262.57;
(b) Export such universal waste only upon consent of the receiving country and in conformance with the EPA Acknowledgement of Consent as defined in subpart E of part 262 of this chapter; and
(c) Provide a copy of the EPA Acknowledgement of Consent for the shipment to the transporter transporting the shipment for export.

(c) 40 CFR 273.30 through 273.40 (Subpart C), "Standards for Large Quantity Handlers of Universal Waste" are incorporated by reference including subsequent amendments and editions.

SUBPART C -- STANDARDS FOR LARGE QUANTITY HANDLERS OF UNIVERSAL WASTE

§ 273.30 Applicability.

This subpart applies to large quantity handlers of universal waste (as defined in 40 CFR 273.6).

§ 273.31 Prohibitions.

A large quantity handler of universal waste is:

(a) Prohibited from disposing of universal waste; and
(b) Prohibited from diluting or treating universal waste, except by responding to releases as provided in 40 CFR 273.37; or by managing specific wastes as provided in 40 CFR 273.33.

§ 273.32 Notification.

(a) (1) Except as provided in paragraphs (a)(2) and (3) of this section, a large quantity handler of universal waste must have sent written notification of universal waste management to the Regional Administrator, and received an EPA Identification Number, before meeting or exceeding the 5,000 kilogram storage limit.
(2) A large quantity handler of universal waste who has already notified EPA of his hazardous waste management activities and has received an EPA Identification Number is not required to renotify under this section.
(3) A large quantity handler of universal waste who manages recalled universal waste pesticides as described in 40 CFR 273.3(a)(1) and who has sent notification to EPA as required by 40 CFR part 165 is not required to notify for those recalled universal waste pesticides under this section.

(b) This notification must include:
(1) The universal waste handler's name and mailing address;
(2) The name and business telephone number of the person at the universal waste handler's site who should be contacted regarding universal waste management activities;
(3) The address or physical location of the universal waste management activities;
(4) A list of all of the types of universal waste managed by the handler (e.g, batteries, pesticides, thermostats);
(5) A statement indicating that the handler is accumulating more than 5,000 kilograms of universal waste at one time and the types of universal waste (e.g, batteries, pesticides, thermostats) the handler is accumulating above this quantity.

§ 273.33 Waste management.

(a) *Universal waste batteries:* A large quantity handler of universal waste must manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:
(1) A large quantity handler of universal waste must contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the battery, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.
(2) A large quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):
(i) Sorting batteries by type;
(ii) Mixing battery types in one container;
(iii) Discharging batteries so as to remove the electric charge;
(iv) Degenerating used batteries;

(v) Disassembling batteries or battery packs into individual batteries or cells;
(vi) Removing batteries from consumer products; or
(vii) Removing electrolyte from batteries.

(3) A large quantity handler of universal waste who removes electrolyte from batteries, or who generates other solid waste (e.g., battery pack materials, discarded consumer products) as a result of the activities listed above, must determine whether the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste identified in 40 CFR part 261, subpart C.

(i) If the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of 40 CFR parts 260 through 272. The handler is considered the generator of the hazardous electrolyte and/or other waste and is subject to 40 CFR part 262.

(ii) If the electrolyte or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

(b) *Universal waste pesticides*: A large quantity handler of universal waste must manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more of the following:

(1) A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; or

(2) A container that does not meet the requirements of paragraph (1), provided that the unacceptable container is overpacked in a container that does meet the requirements of paragraph (1); or

(3) A tank that meets the requirements of 40 CFR part 265 subpart J, except for 40 CFR 265.197(c), 265.200, and 265.201; or

(4) A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(c) *Universal waste thermostats:* A large quantity handler of universal waste must manage universal waste thermostats in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(1) A large quantity handler of universal waste must contain any universal waste thermostat that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the thermostat, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(2) A large quantity handler of universal waste may remove mercury-containing ampules from universal waste thermostats provided the handler:

(i) removes the ampules in a manner designed to prevent breakage of the ampules;
(ii) removes ampules only over or in a containment device (e.g., tray or pan sufficient to contain any mercury released from an ampule in case of breakage);
(iii) ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules, from the containment device to a container that meets the requirements of 40 CFR 262.34;
(iv) immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of 40 CFR 262.34;
(v) ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;
(vi) ensures that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;
(vii) stores removed ampules in closed, non-leaking containers that are in good condition;
(viii) packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation; and

(3) (i) A large quantity handler of universal waste who removes mercury-containing ampules from thermostats must determine whether the following exhibit a characteristic of hazardous waste identified in 40 CFR part 261, subpart C:

(A) Mercury or clean-up residues resulting from spills or leaks; and/or
(B) Other solid waste generated as a result of the removal of mercury-containing ampules (e.g., remaining thermostat units).

(ii) If the mercury, residues, and/or other solid waste exhibit a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of 40 CFR parts 260 through 272. The handler is considered the generator of the mercury, residues, and/or other waste and is subject to 40 CFR part 262.

(iii) If the mercury, residues, and/or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

§ 273.34 Labeling/marking.

A large quantity handler of universal waste must label or mark the universal waste to identify the type of universal waste as specified below:

(a) Universal waste batteries (i.e., each battery), or a container or tank in which the batteries are contained, must be labeled or marked clearly with the any one of the following phrases: "Universal Waste - Battery(ies)," or "Waste Battery(ies)," or "Used Battery(ies);"
(b) A container (or multiple container package unit), tank, transport vehicle or vessel in which recalled universal waste pesticides as described in 40 CFR 273.3(a)(1) are contained must be labeled or marked clearly with:
  (1) The label that was on or accompanied the product as sold or distributed; and
  (2) The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s);"
(c) A container, tank, or transport vehicle or vessel in which unused pesticide products as described in 40 CFR 273.3(a)(2) are contained must be labeled or marked clearly with:
  (1) (i) The label that was on the product when purchased, if still legible;
    (ii) If using the labels described in paragraph (c)(1)(i) of this section is not feasible, the appropriate label as required under the Department of Transportation regulation 49 CFR part 172;
    (iii) If using the labels described in paragraphs (c)(1)(i) and (1)(ii) of this section is not feasible, another label prescribed or designated by the pesticide collection program; and
  (2) The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s)."
(d) Universal waste thermostats (i.e., each thermostat), or a container or tank in which the thermostats are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Mercury Thermostat(s)," or "Waste Mercury Thermostat(s)," or "Used Mercury Thermostat(s).

§ 273.35 Accumulation time limits.

(a) A large quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of paragraph (b) of this section are met.
(b) A large quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity was solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.
(c) A large quantity handler of universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:
  (1) Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;
  (2) Marking or labeling the individual item of universal waste (e.g., each battery or thermostat) with the date it became a waste or was received;
  (3) Maintaining an inventory system on-site that identifies the date the universal waste being accumulated became a waste or was received;
  (4) Maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;
  (5) Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received; or
  (6) Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

§ 273.36 Employee training.

A large quantity handler of universal waste must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal facility operations and emergencies.

§ 273.37 Response to releases.

(a) A large quantity handler of universal waste must immediately contain all releases of universal wastes and other residues from universal wastes.
(b) A large quantity handler of universal waste must determine whether any material resulting from the release is hazardous waste, and if so, must manage the hazardous waste in compliance with all applicable requirements of 40 CFR parts 260 through 272. The handler is considered the generator of the material resulting from the release, and is subject to 40 CFR part 262.

§ 273.38 Off-site shipments.

(a) A large quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.
(b) If a large quantity handler of universal waste self-transports universal waste off-site, the handler becomes a universal waste transporter for those self-transportation activities and must comply with the transporter requirements of subpart D of this part while transporting the universal waste.
(c) If a universal waste being offered for off-site transportation meets the definition of hazardous materials under 49 CFR 171 through 180, a large quantity handler of universal waste must package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with the applicable Department of Transportation regulations under 49 CFR parts 172 though 180;
(d) Prior to sending a shipment of universal waste to another universal waste handler, the originating handler must ensure that the receiving handler agrees to receive the shipment.
(e) If a large quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler must either:
  (1) Receive the waste back when notified that the shipment has been rejected, or
  (2) Agree with the receiving handler on a destination facility to which the shipment will be sent.
(f) A large quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that he has received from another handler. If a handler rejects a shipment or a portion of a shipment, he must contact the originating handler to notify him of the rejection and to discuss reshipment of the load. The handler must:
  (1) Send the shipment back to the originating handler, or
  (2) If agreed to by both the originating and receiving handler, send the shipment to a destination facility.
(g) If a large quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler must immediately notify the appropriate regional EPA office of the illegal shipment, and provide the name, address, and phone number of the originating shipper. The EPA regional office will provide instructions for managing the hazardous waste.
(h) If a large quantity handler of universal waste receives a shipment of non-hazardous, non-universal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

§ 273.39 Tracking universal waste shipments.

(a) *Receipt of shipments.* A large quantity handler of universal waste must keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received must include the following information:
  (1) The name and address of the originating universal waste handler or foreign shipper from whom the universal waste was sent;
  (2) The quantity of each type of universal waste received (e.g., batteries, pesticides, thermostats);
  (3) The date of receipt of the shipment of universal waste.
(b) *Shipments off-site.* A large quantity handler of universal waste must keep a record of each shipment of universal waste sent from the handler to other facilities. The record may take the form of a log, invoice, manifest, bill of lading or other shipping document. The record for each shipment of universal waste sent must include the following information:
  (1) The name and address of the universal waste handler, destination facility, or foreign destination to whom the universal waste was sent;

(2) The quantity of each type of universal waste sent (e.g., batteries, pesticides, thermostats);
(3) The date the shipment of universal waste left the facility.

(c) *Record retention.* (1) A large quantity handler of universal waste must retain the records described in paragraph (a) of this section for at least three years from the date of receipt of a shipment of universal waste.
(2) A large quantity handler of universal waste must retain the records described in paragraph (b) of this section for at least three years from the date a shipment of universal waste left the facility.

§ 273.40 Exports.

A large quantity handler of universal waste who sends universal waste to a foreign destination other than to those OECD countries specified in 40 CFR 262.58(a)(1) (in which case the handler is subject to the requirements of 40 CFR part 262, subpart H) must:

(a) Comply with the requirements applicable to a primary exporter in 40 CFR 262.53, 262.56(a)(1) through (4), (6), and (b) and 262.57;
(b) Export such universal waste only upon consent of the receiving country and in conformance with the EPA Acknowledgement of Consent as defined in subpart E of part 262 of this chapter; and
(c) Provide a copy of the EPA Acknowledgement of Consent for the shipment to the transporter transporting the shipment for export.

(d) 40 CFR 273.50 through 273.56 (Subpart D), "Standards for Universal Waste Transporters" are incorporated by reference including subsequent amendments and editions.

SUBPART D -- STANDARDS FOR UNIVERSAL WASTE TRANSPORTERS.

§ 273.50 Applicability.

This subpart applies to universal waste transporters (as defined in 40 CFR 273.6).

§ 273.51 Prohibitions.

A universal waste transporter is:

(a) Prohibited from disposing of universal waste; and
(b) Prohibited from diluting or treating universal waste, except by responding to releases as provided in 40 CFR 273.54.

§ 273.52 Waste management.

(a) A universal waste transporter must comply with all applicable U.S. Department of Transportation regulations in 49 CFR part 171 through 180 for transport of any universal waste that meets the definition of hazardous material in 49 CFR 171.8. For purposes of the Department of Transportation regulations, a material is considered a hazardous waste if it is subject to the Hazardous Waste Manifest Requirements of the U.S. Environmental Protection Agency specified in 40 CFR part 262. Because universal waste does not require a hazardous waste manifest, it is not considered hazardous waste under the Department of Transportation regulations.
(b) Some universal waste materials are regulated by the Department of Transportation as hazardous materials because they meet the criteria for one or more hazard classes specified in 49 CFR 173.2. As universal waste shipments do not require a manifest under 40 CFR 262, they may not be described by the DOT proper shipping name "hazardous waste, (l) or (s), n.o.s.", nor may the hazardous material's proper shipping name be modified by adding the word "waste".

§ 273.53 Storage time limits.

(a) A universal waste transporter may only store the universal waste at a universal waste transfer facility for ten days or less.
(b) If a universal waste transporter stores universal waste for more than ten days, the transporter becomes a universal waste handler and must comply with the applicable requirements of subparts B or C of this part while storing the universal waste.

§ 273.54 Response to releases.

(a) A universal waste transporter must immediately contain all releases of universal wastes and other residues from universal wastes.
(b) A universal waste transporter must determine whether any material resulting from the release is hazardous waste, and if so, it is subject to all applicable requirements of 40 CFR parts 260 through 272. If the waste is determined to be a hazardous waste, the transporter is subject to 40 CFR part 262.

§ 273.55 Off-site shipments.

(a) A universal waste transporter is prohibited from transporting the universal waste to a place other than a universal waste handler, a destination facility, or a foreign destination.

(b) If the universal waste being shipped off-site meets the Department of Transportation's definition of hazardous materials under 49 CFR 171.8, the shipment must be properly described on a shipping paper in accordance with the applicable Department of Transportation regulations under 49 CFR part 172.

§ 273.56 Exports.

A universal waste transporter transporting a shipment of universal waste to a foreign destination other than to those OECD countries specified in 40 CFR 262.58(a)(1) (in which case the transporter is subject to the requirements of 40 CFR part 262, subpart H) may not accept a shipment if the transporter knows the shipment does not conform to the EPA Acknowledgment of Consent. In addition the transporter must ensure that:
(a) A copy of the EPA Acknowledgment of Consent accompanies the shipment; and
(b) The shipment is delivered to the facility designated by the person initiating the shipment.

(e) 40 CFR 273.60 through 273.62 (Subpart E), "Standards for Destination Facilities" are incorporated by reference including subsequent amendments and editions.

SUBPART E -- STANDARDS FOR DESTINATION FACILITIES

§ 273.60 Applicability.

(a) The owner or operator of a destination facility (as defined in 40 CFR 273.6) is subject to all applicable requirements of parts 264, 265, 266, 268, 270, and 124 of this chapter, and the notification requirement under Section 3010 of RCRA:
(b) The owner or operator of a destination facility that recycles a particular universal waste without storing that universal waste before it is recycled must comply with 40 CFR 261.6(c)(2).

§ 273.61 Off-site shipments.

(a) The owner or operator of a destination facility is prohibited from sending or taking universal waste to a place other than a universal waste handler, another destination facility or foreign destination.
(b) The owner or operator of a destination facility may reject a shipment containing universal waste, or a portion of a shipment containing universal waste. If the owner or operator of the destination facility rejects a shipment or a portion of a shipment, he must contact the shipper to notify him of the rejection and to discuss reshipment of the load. The owner or operator of the destination facility must:
    (1) Send the shipment back to the original shipper, or
    (2) If agreed to by both the shipper and the owner or operator of the destination facility, send the shipment to another destination facility.
(c) If the a owner or operator of a destination facility receives a shipment containing hazardous waste that is not a universal waste, the owner or operator of the destination facility must immediately notify the appropriate regional EPA office of the illegal shipment, and provide the name, address, and phone number of the shipper. The EPA regional office will provide instructions for managing the hazardous waste.
(d) If the owner or operator of a destination facility receives a shipment of non-hazardous, non-universal waste, the owner or operator may manage the waste in any way that is in compliance with applicable federal or state solid waste regulations.

§ 273.62 Tracking universal waste shipments.

(a) The owner or operator of a destination facility must keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received must include the following information:
    (1) The name and address of the universal waste handler, destination facility, or foreign shipper from whom the universal waste was sent;
    (2) The quantity of each type of universal waste received (e.g., batteries, pesticides, thermostats);
    (3) The date of receipt of the shipment of universal waste.
(b) The owner or operator of a destination facility must retain the records described in paragraph (a) of this section for at least three years from the date of receipt of a shipment of universal waste.

(f) 40 CFR 273.70 (Subpart F), "Import Requirements" is incorporated by reference including subsequent amendments and editions.

SUBPART F -- IMPORT REQUIREMENTS

§ 273.70 Imports.

Persons managing universal waste that is imported from a foreign country into the United States are subject to the applicable requirements of this part, immediately after the waste enters the United States, as indicated in paragraphs (a) through (c) of this section:

(a) A universal waste transporter is subject to the universal waste transporter requirements of subpart D of this part.

(b) A universal waste handler is subject to the small or large quantity handler of universal waste requirements of subparts B or C, as applicable.

(c) An owner or operator of a destination facility is subject to the destination facility requirements of subpart E of this part.

(d) Persons managing universal waste that is imported from an OECD country as specified in 40 CFR 262.58(a)(1) are subject to paragraphs (a) through (c) of this section, in addition to the requirements of 40 CFR part 262, subpart H.

(g) 40 CFR 273.80 through 273.81 (Subpart G), "Petitions to include Other Wastes Under 40 CFR Part 273" are incorporated by reference including subsequent amendments and editions, except that 40 CFR 273.80(a) and (b), are not incorporated by reference.

(1) The following shall be substituted for the provisions of 40 CFR 273.80(a) which were not incorporated by reference:
Any person seeking to add a hazardous waste or a category of hazardous waste to this Part may petition for a regulatory amendment under this Subpart and 15A NCAC 24B .0001 and 40 CFR 260.23.

(2) The following shall be substituted for the provisions of 40 CFR 273.80(b) which were not incorporated by reference:
To be successful, the petitioner must demonstrate to the satisfaction of the Administrator that regulation under the universal waste regulations of 40 CFR Part 273 is:
(A) appropriate for the waste or category of waste; will improve management practices for the waste or category of waste; and will improve implementation of the hazardous waste program;
(B) The petition must include the information required by 15A NCAC 24B .0001; and
(C) The petition shall also address as many of the factors listed in 40 CFR 273.81 as are appropriate for the waste or waste category addressed in the petition.

SUBPART G -- PETITIONS TO INCLUDE OTHER WASTES UNDER 40 CFR PART 273

§ 273.80 General.

(a) **See 15A NCAC 13A .0019(g)(1).**
(b) **See 15A NCAC 13A .0019(g)(2).**
(c) The Administrator will evaluate petitions using the factors listed in 40 CFR 273.81. The Administrator will grant or deny a petition using the factors listed in 40 CFR 273.81. The decision will be based on the weight of evidence showing that regulation under 40 CFR part 273 is appropriate for the waste or category of waste, will improve management practices for the waste or category of waste, and will improve implementation of the hazardous waste program.

§ 273.81 Factors for Petitions to Include Other Wastes under 40 CFR Part 273.

(a) The waste or category of waste, as generated by a wide variety of generators, is listed in subpart D of part 261 of this chapter, or (if not listed) a proportion of the waste stream exhibits one or more characteristics of hazardous waste identified in subpart C of part 261 of this chapter. (When a characteristic waste is added to the universal waste regulations of 40 CFR part 273 by using a generic name to identify the waste category (e.g., batteries), the definition of universal waste in 40 CFR 260.10 and 273.6 will be amended to include only the hazardous waste portion of the waste category (e.g., hazardous waste batteries). Thus, only the portion of the waste stream that does exhibit one or more characteristics (i.e., is hazardous waste) is subject to the universal waste regulations of 40 CFR part 273;
(b) The waste or category of waste is not exclusive to a specific industry or group of industries, is commonly generated by a wide variety of types of establishments (including, for example, households, retail and commercial businesses, office complexes, conditionally exempt small quantity generators, small businesses, government organizations, as well as large industrial facilities);
(c) The waste or category of waste is generated by a large number of generators (e.g., more than 1,000 nationally) and is frequently generated in relatively small quantities by each generator;
(d) Systems to be used for collecting the waste or category of waste (including packaging, marking, and labeling practices) would ensure close stewardship of the waste;

(e) The risk posed by the waste or category of waste during accumulation and transport is relatively low compared to other hazardous wastes, and specific management standards proposed or referenced by the petitioner (e.g., waste management requirements appropriate to be added to 40 CFR 273.13, 273.33, and 273.52; and/or applicable Department of Transportation requirements) would be protective of human health and the environment during accumulation and transport;

(f) Regulation of the waste or category of waste under 40 CFR part 273 will increase the likelihood that the waste will be diverted from non-hazardous waste management systems (e.g, the municipal waste stream, non-hazardous industrial or commercial waste stream, municipal sewer or stormwater systems) to recycling, treatment, or disposal in compliance with Subtitle C of RCRA.

(g) Regulation of the waste or category of waste under 40 CFR part 273 will improve implementation of and compliance with the hazardous waste regulatory program; and/or

(h) Such other factors as may be appropriate.

History Note: Statutory Authority G.S. 130A-294(c); 150B-21.6;
Eff. January 1, 1996;
Recodified from 15A NCAC 13A .0019 Eff. December 20, 1996.

PART II
SOLID WASTE MANAGEMENT LAW

ARTICLE 1

Part 2. Remedies

G.S. 130A-17 To -28

ARTICLE 9

G.S. 130A-290 To -310.22

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January, 1997

"ARTICLE 1.
Solid Waste Management

Part 2. Remedies.

GS 130A-17. Right of Entry.

The Secretary and a local health director shall have the right to entry upon the premises of any place where entry is necessary to carry out the provisions of this Chapter or the rules adopted by the Commission or a local board of health. If consent for entry is not obtained, an administrative search and inspection warrant shall be obtained pursuant to G.S. 15-27.2. However, if an imminent hazard exists, no warrant is required for entry upon the premises.

GS 130A-18. Injunction.

If a person shall violate any provision of this Chapter or the rules adopted by the Commission or rules adopted by a local board of health, the Secretary or a local health director may institute an action for injunctive relief, irrespective of all other remedies at law, in the superior court of the county where the violation occurred or where a defendant resides.

GS 130A-19. Abatement of public health nuisance.

If the Secretary or a local health director determines that a public health nuisance exists, the Secretary or a local health director may issue an order of abatement directing the owner, lessee, operator or other person in control of the property to take any action necessary to abate the public health nuisance. If the person refuses to comply with the order, the Secretary or the local health director may institute an action in the superior court of the county where the public health nuisance exists to enforce the order. The action shall be calendared for trial within 60 days after service of the complaint upon the defendant. The court may order the owner to abate the nuisance or direct the Secretary or the local health director to abate the nuisance. If the Secretary or the local health director is ordered to abate the nuisance, the Department or the local health department shall have a lien on the property for the costs of the abatement of the nuisance in the nature of a mechanic's and materialmen's lien as provided in Chapter 44A of the General Statutes and the lien may be enforced as provided therein.

GS 130A-20. Abatement of an imminent hazard.

If the Secretary or a local health director determines that an imminent hazard exists, the Secretary or a local health director may, after notice to or reasonable attempt to notify the owner, enter upon any property and take any action necessary to abate the imminent hazard. The Department or the local health department shall have a lien on the property for the cost of the abatement of the imminent hazard in the nature of a mechanic's and materialmen's lien as provided in Chapter 44A and the lien may be enforced as provided therein. The lien may be defeated by a showing that an imminent hazard did not exist at the time the Secretary or the local health director took the action.

GS 130A-21. Embargo. Not applicable to Hazardous Waste.

GS 130A-22. Administrative penalties.

(a) The Secretary may impose an administrative penalty on a person who violates Article 9 of this Chapter, rules adopted by the Commission pursuant to Article 9, or any order issued under Article 9. Each day of a continuing violation shall constitute a separate violation. The penalty shall not exceed five thousand dollars ($5,000.00) per day in the case of a violation involving nonhazardous waste. The penalty shall not exceed twenty-five thousand dollars ($25,000) per day in the case of a violation involving hazardous waste as defined in G.S. 130A-290 or involving the disposal of medical waste as defined in G.S. 130A-290 in or upon water in a manner that results in medical waste entering waters or lands of the State; and shall not exceed fifty thousand dollars $50,000) per day for a second or further violation involving the disposal of medical waste as defined in G.S. 130A-290 in or upon water in a manner that results in medical waste entering waters or lands of the State. If a person fails to pay a civil penalty within 60 days after the final agency decision or court order has been served on the violator, the Secretary shall request the Attorney General to institute a civil action in the superior court of any county in which the violator resides or has his or its principal place of business to recover the amount of the assessment. Such civil actions must be filed within three years of the date the final agency decision or court order was served on the violator.

(a1) Part 5 of Article 21A of Chapter 143 of the General Statutes shall apply to the determination of civil liability or penalty pursuant to Subsection (a) of this section.

(b) The Secretary may impose an administrative penalty on a person who violates G.S. 130A-325. Each day of a continuing violation shall constitute a separate violation. The penalty shall not exceed twenty-five thousand dollars ($25,000) for each day the violation continues.

(b1) The Secretary may impose an administrative penalty on a person who violates Article 19 of this Chapter or a rule adopted pursuant to that Article. Except as provided in subsection (b2) of this section, the penalty shall not exceed one thousand dollars ($1,000) per day per violation. Until the Department has notified the person of the violation, a continuing violation shall be treated as one violation. Each day thereafter of a continuing violation shall be treated as a separate violation.

In determining the amount of a penalty under this subsection or subsection (b2) of this section, the Secretary shall consider all of the following factors:

(1) The degree and extent of harm to the natural resources of the State, to the public health, or to private property resulting from the violation.
(2) The duration and gravity of the violation.
(3) The effect on air quality.
(4) The cost of rectifying the damage.
(5) The amount of money the violator saved by noncompliance.
(6) The prior record of the violator in complying or failing to comply with Article 19 of this Chapter or a rule adopted pursuant to that Article.
(7) The cost to the State of the enforcement procedures.
(8) If applicable, the size of the renovation and demolition involved in the violation.

Administrative penalties imposed by the Secretary under this subsection or subsection (b2) of this section shall be credited to the General Fund as nontax revenue.

(b2) The penalty for violations of the asbestos NESHAP for demolition and renovation, as defined in G.S. 130A-444, shall not exceed ten thousand dollars (10,000) per day per violation. Until the Department has provided the person with written notification of the violation of the asbestos NESHAP for demolition and renovation that describes the violation, recommends a general course of action and establishes a time frame in which to correct the violations, a continuing violation shall be treated as one violation. Each day thereafter of a continuing violation shall be treated as a separate violation. A violation of the asbestos NESHAP for demolition and renovation is not considered to continue during the period a person who has received the notice of violation is following the general course of action and complying with the time frame set forth in the notice of violation.

(c) The Secretary may impose an administrative penalty on a person who willfully violates Article 11 of this Chapter, rules adopted by the Commission pursuant to Article 11 or any condition imposed upon a permit issued under Article 11. An administrative penalty may not be imposed upon a person who establishes that neither the site nor the system may be improved or a new system installed so as to comply with Article 11 of this Chapter. Each day of a continuing violation shall constitute a separate violation. The penalty shall not exceed fifty dollars ($50.00) per day in the case of a sewage collection, treatment and disposal system with a design daily flow of no more than 480 gallons or in the case of any system serving a single one-family dwelling. The penalty shall not exceed three hundred dollars ($300.00) per day in the case of a sewage collection, treatment and disposal system with a design daily flow of more than 480 gallons which does not serve a single one-family dwelling.

(c1) Note: See the General Statutes of North Carolina.

(d) In determining the amount of the penalty in subsections (a), (b) and (c), the Secretary shall consider the degree and extent of the harm caused by the violation and the cost of rectifying the damage.

(e) A person contesting a penalty shall, by filing a petition pursuant to G.S. 150B-23(a) not later than 30 days after receipt by the petitioner of the document which constitutes agency action, be entitled to an administrative hearing and judicial review in accordance with Chapter 150B of the General Statutes, the Administrative Procedure Act.

(f) The Commission shall adopt rules concerning the imposition of administrative penalties under this section.

(g) The Secretary may bring a civil action in the superior court of the county where the violation occurred or where the defendant resides to recover the amount of the administrative penalty whenever a person:

(1) Who has not requested an administrative hearing in accordance with Subsection (e) of this section fails to pay the penalty within 60 days after being notified of the penalty; or
(2) Who has requested an administrative hearing fails to pay the penalty within 60 days after service of a written copy of the final agency decision.

(h) A local health director may impose an administrative penalty on any person who willfully violates wastewater collection, treatment, and disposal rules of the local board of health adopted pursuant to G.S. 130A-335(c) or who willfully violates a condition imposed upon a permit issued under the approved local rules. An administrative penalty may not be imposed upon a person who establishes that neither the site nor the system may be improved or a new system installed so as to comply with Article 11 of this chapter. The local health director shall establish and recover the amount of the administrative penalty in accordance with subsections (d) and (g). Each day of a continuing violation shall constitute a separate violation. The penalty shall not exceed fifty

dollars ($50.00) per day in the case of a wastewater collection, treatment and disposal system with a design daily flow of no more than 480 gallons or in the case of any system serving a single one-family dwelling. The penalty shall not exceed three hundred dollars ($300.00) per day in the case of a wastewater collection, treatment and disposal system with a design daily flow of more than 480 gallons which does not serve a single one-family dwelling. A person contesting a penalty imposed under this subsection shall be entitled to an administrative hearing and judicial review in accordance with G.S. 130A-24. A local board of health shall adopt rules concerning the imposition of administrative penalties under this subsection.

GS 130A-23. Suspension and revocation of permits and program participation.

(a) The Secretary may suspend or revoke a permit issued under this Chapter upon a finding that a violation of the applicable provisions of this chapter, the rules of the Commission or a condition imposed upon the permit has occurred. A permit may also be suspended or revoked upon a finding that its issuance was based upon incorrect or inadequate information that materially affected the decision to issue the permit.
(b) The Secretary may suspend or revoke a person's participation in a program administered under this Chapter upon a finding that a violation of the applicable provisions of this Chapter or the rules of the Commission has occurred. Program participation may also be suspended or revoked upon a finding that participation was based upon incorrect or inadequate information that materially affected the decision to grant program participation.
(c) A person shall be given notice that there has been a tentative decision to suspend or revoke the permit or program participation and that an administrative hearing will be held in accordance with Chapter 150B of the General Statutes, the Administrative Procedure Act, at which time the person may challenge the tentative decision.
(d) A permit shall be suspended or revoked immediately if a violation of the Chapter, the rules or a condition imposed upon the permit presents an imminent hazard. An operation permit issued pursuant to G.S. 130A-281 shall be immediately suspended for failure of a public swimming pool to maintain minimum water quality or safety standards or design and construction standards pertaining to the abatement of suction hazardous which result in an unsafe condition. A permit issued pursuant to G.S. 130A-248 shall be revoked immediately for failure of an establishment to maintain a minimum grade of C. The Secretary shall immediately give notice of the suspension or revocation and the right of the permit holder or program participant to appeal the suspension or revocation under G.S. 150B-23.

GS 130A-24. Appeals procedure.

(a) Appeals concerning the enforcement of rules adopted by the Commission, concerning the suspension and revocation of permits and program participation by the Secretary and concerning the imposition of administrative penalties by the Secretary shall be governed by Chapter 150B of the General Statutes, the Administrative Procedure Act.
(a1) through (d): See the General Statutes of N.C.

GS 130A-25. Misdemeanor.

(a) A person who violates a provision of this Chapter or the rules adopted by the Commission or a local board of health shall be guilty of a misdemeanor.
(b) Not applicable to Solid Waste.
(c) Not applicable to Solid Waste.

GS 130A-26. Violations of Article 4. Not applicable to Solid Waste.

GS 130A-26.1. Criminal violation of Article 9.

(NOTE: See the General Statutes of North Carolina, §130A-26.1(g) for laws applicable to a Class 1 Felony and a fine for per day violations for those who generate, store, transport, or dispose of hazardous waste in non-compliance with rules promulgated under G.S. 130A-294(c)).

GS 130A-27. Recovery of money.

The Secretary may institute an action in the county where the action arose or the county where the defendant resides to recover any money, other property or interest in property or the monetary value of goods or services provided or paid for by the Department which are wrongfully paid or transferred to a person under a program administered by the Department pursuant to this Chapter.

GS 130A-28. Forfeiture of gain.

In the case of a violation of this Chapter or the rules adopted by the Commission, money or other property or interest in property so acquired shall be forfeited to the State unless ownership by an innocent person may be established. An action may be instituted by the Attorney General or a district attorney pursuant to G.S. 1-532.

ARTICLE 9.
Solid Waste Management.

Part 1. Definitions.

GS 130A-290. Definitions.

(a) Unless a different meaning is required by the context, the following definitions shall apply throughout this Article:

(1) "CERCLA/SARA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 2767, 42 U.S.C. Section 9601 et seq., as amended, and the Superfund Amendments and Reauthorization Act of 1986, Publ L. No. 99-499, 100 Stat. 1613, as amended.

(1a) "Chemical or portable toilet" means a self-contained mobile toilet facility and holding tank and includes toilet facilities in recreational vehicles.

(1b) "Chlorofluorocarbon refrigerant" means any of the following when used as a liquid heat transfer agent in a mechanical refrigeration system: carbon tetrachloride, chlorofluorocarbons, halons, or methyl chloroform.

(2) "Closure" means the cessation of operation of a solid waste management facility and the act of securing the facility so that it will pose no significant threat to human health or the environment.

(3) "Commercial" when applied to a hazardous waste facility, means a hazardous waste facility that accepts hazardous waste from the general public or from another person for a fee.

(4) "Construction" or "demolition" when used in connection with "waste" or "debris" means solid waste resulting solely from construction, remodeling, repair, or demolition operations on pavement, buildings, or other structures, but does not include inert debris, land-clearing debris or yard debris.

(5) Repealed by Session Laws 1995 (Regular Session, 1996), c.594, s.1, effective October 1, 1996.

(6) "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste into or on any land or water so that the solid waste or any constituent part of the solid waste may enter the environment or be emitted into the air or discharged into any waters, including groundwaters.

(7) "Garbage" means all putrescible wastes, including animal offal and carcasses, and recognizable industrial by-products, but excluding sewage and human waste.

(8) "Hazardous waste" means a solid waste, or combination of solid wastes, which 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, disposed of or otherwise managed.

(9) "Hazardous waste facility" means a facility for the collection, storage, processing, treatment, recycling, recovery, or disposal of hazardous waste.

(10) "Hazardous waste generation" means the act or process of producing hazardous waste.

(11) "Hazardous waste disposal facility" means any facility or any portion of a facility for disposal of hazardous waste on or in land in accordance with rules adopted under this Article.

(12) "Hazardous waste management" means the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery and disposal of hazardous wastes.

(13) "Hazardous waste management program" means the program and activities within the Department pursuant to Part 2 of this Article, for hazardous waste management.

(13a) " Industrial solid waste" means solid waste generated by manufacturing or industrial processes that is not hazardous waste.

(14) "Inert debris" means solid waste which consists solely of material that is virtually inert and that is likely to retain its physical and chemical structure under expected conditions of disposal.

(15) "Land-clearing debris" means solid waste which is generated solely from land-clearing activities.

(16) "Landfill" means a disposal facility or part of a disposal facility where waste is placed in or on land and which is not a land treatment facility, a surface impoundment, an injection well, a hazardous waste long-term storage facility or a surface storage facility.

(17) "Manifest" means the form used for identifying the quantity, composition and the origin, routing and destination of hazardous waste during its transportation from the point of generation to the point of disposal, treatment or storage.

(18) "Medical waste" means any solid waste which is generated in the diagnosis, treatment, or immunization of human beings or animals, in research pertaining thereto, or in the production or testing of biologicals, but does not include any hazardous waste identified or listed pursuant to this Article, radioactive waste, household waste as defined in 40 Code of Federal Regulations Section 261.4(b)(1) in effect on 1 July 1989, or those substances excluded from the definition of "solid waste" in this section.

(18a) "Municipal solid waste" means any solid waste resulting from the operation of residential, commercial, industrial, governmental, or institutional establishments that would normally be collected, processed, and disposed of through a public or private solid waste management service. Municipal solid waste does not include hazardous waste, sludge, industrial waste managed in a solid waste management facility owned and operated by the generator of the industrial waste for management of that waste, or solid waste from mining or agricultural operations.

(18b) "Municipal solid waste management facility" means any publicly or privately owned solid waste management facility permitted by the Department that receives municipal solid waste for processing, treatment, or disposal.

(19) "Natural resources" means all materials which have useful physical or chemical properties which exist, unused, in nature.

(20) "Open dump" means a solid waste disposal site which is not a sanitary landfill.

(21) "Operator" means any person, including the owner, who is principally engaged in, and is in charge of, the actual operation, supervision, and maintenance of a solid waste management facility and includes the person in charge of a shift or periods of operation during any part of the day.

(22) "Person" means an individual, corporation, company, association, partnership, unit of local government, State agency, federal agency or other legal entity.

(23) "Processing" means any technique designed to change the physical, chemical, or biological character or composition of any solid waste so as to render it safe for transport; amenable to recovery, storage or recycling; safe for disposal; or reduced in volume or concentration.

(24) "Recovered material" means a material that has known recycling potential, can be feasibly recycled, and has been diverted or removed from the solid waste stream for sale, use, or reuse. In order to qualify as a recovered material, a material must meet the requirements of G.S. 130A-309.05(c).

(25) "RCRA" means the Resource Conservation and Recovery Act of 1976, Pub. L. 94-580, 90 Stat. 2795, 42 U.S.C. Section 6901 **et seq.**, as amended.

(26) "Recyclable material" means those materials which are capable of being recycled and which would otherwise be processed or disposed of as solid waste.

(27) "Recycling" means any process by which solid waste, or materials which would otherwise become solid waste, are collected, separated, or processed, and reused or returned to use in the form of raw materials or products..

(28) "Refuse" means all nonputrescible waste.

(28a) "Refuse-derived fuel" means a form of fuel derived from a municipal solid waste by a processing system in which recyclable and noncombustible materials are removed and the remaining combustible material is converted for use as a fuel.

(29) "Resource recovery" means the process of obtaining material or energy resources from discarded solid waste which no longer has any useful life in its present form and preparing the solid for recycling.

(30) "Reuse" means a process by which resources are reused or rendered usable.

(31) "Sanitary landfill" means a facility for disposal of solid waste on land in a sanitary manner in accordance with the rules concerning sanitary landfills adopted under this Article.

(32) "Septage" means solid waste that is a fluid mixture of untreated and partially treated sewage solids, liquids and sludge of human or domestic origin which is removed from a wastewater system. The term septage includes the following:
(NOTE: See the General Statutes of North Carolina, 130A-290. Definitions (a)32(a)-(e)).

(33) "Septage management firm" means a person engaged in the business of pumping, transporting, storing, treating or disposing septage. The term does not include public or community wastewater systems that treat or dispose septage.

(34) "Sludge" means any solid, semisolid or liquid waste generated from a municipal, commercial, institutional or industrial wastewater treatment plant, water supply treatment plant or air pollution control facility, or any other waste having similar characteristics and effects.

(35) "Solid waste" means any hazardous or nonhazardous garbage, refuse or sludge from a waste treatment plant, water supply treatment plant or air pollution control facility, domestic sewage and sludges generated by the treatment thereof in sanitary sewage collection, treatment and disposal systems, and other material that is either discarded or is being accumulated, stored or treated prior to being discarded, or has served its original intended use and is generally discarded, including solid, liquid, semisolid or contained gaseous material resulting from industrial, institutional, commercial and agricultural operations, and from community activities. The term does not include:

a. Fecal waste from fowls and animals other than humans;

b. Solid or dissolved material in:

(1) Domestic sewage and sludges generated by treatment thereof in sanitary sewage collection, treatment and disposal systems which are designed to discharge effluents to the surface waters;

(2) Irrigation return flows; and
(3) Wastewater discharges and the sludges incidental to and generated by treatment which are point sources subject to permits granted under Section 402 of the Water Pollution Control Act, as amended (P.L. 92-500), and permits granted under G.S. 143-215.1 by the Environmental Management Commission. However, any sludges that meet the criteria for hazardous waste under RCRA shall also be a solid waste for the purposes of this Article;

c. Oils and other liquid hydrocarbons controlled under Article 21A of Chapter 143 of the General Statutes. However, any oils or other liquid hydrocarbons that meet the criteria for hazardous waste under RCRA shall also be a solid waste for the purposes of this Article;

d. Any source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, as amended (42 U.S.C. Section 2011).

e. Mining refuse covered by the North Carolina Mining Act, G.S. 74-46 through 74-68 and regulated by the North Carolina Mining Commission (as defined under G.S. 143B-290). However, any specific mining waste that meets the criteria for hazardous waste under RCRA shall also be a solid waste for the purposes of this Article.

f. Recovered material.

(36) "Solid waste disposal site" means any place at which solid wastes are disposed of by incineration, sanitary landfill or any other method.

(37) "Solid waste generation" means the act or process of producing solid waste.

(38) "Solid waste management" means purposeful, systematic control of the generation, storage, collection, transport, separation, treatment, processing, recycling, recovery and disposal of solid waste.

(39) "Solid waste management facility" means land, personnel and equipment used in the management of solid waste.

(40) "Special wastes" means solid wastes that can require special handling and management, including white goods, whole tires, used oil, lead-acid batteries, and medical wastes.

(41) "Storage" means the containment of solid waste, either on a temporary basis or for a period of years, in a manner which does not constitute disposal.

(41a) "Tire-derived fuel" means a form of fuel derived from scrap tires.

(42) "Treatment" means 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 such waste or so as to render such waste nonhazardous, safer for transport, amenable for recovery, amenable for storage or reduced in volume. "Treatment" includes any activity or processing designed to change the physical form or chemical composition of hazardous waste so as to render it nonhazardous.

(43) "Unit of local government" means a county, city, town or incorporated village.

(44) "White goods" includes refrigerators, ranges, water heaters, freezers, unit air conditioners, washing machines, dishwashers, clothes dryers, and other similar domestic and commercial large appliances.

(45) "Yard trash" means solid waste consisting solely of vegetative matter resulting from landscaping maintenance.

(b) Unless a different meaning is required by the context, the following definitions shall apply throughout G.S. 130A-309.15 through G.S. 130A-309.24:

(1) "Public used oil collection center" means:

a. Automotive service facilities or governmentally sponsored collection facilities, which in the course of business accept for disposal small quantities of used oil from households; and

b. Facilities which store used oil in aboveground tanks, which are approved by the Department and which in the course of business accept for disposal small quantities of used oil from households.

(2) "Reclaiming" means the use of methods, other than those used in rerefining, to purify used oil primarily to remove insoluble contaminants, making the oil suitable for further use; the methods may include settling, heating, dehydration, filtration, or centrifuging.

(3) "Recycling" means to prepare used oil for reuse as a petroleum product by rerefining, reclaiming, reprocessing, or other means or to use used oil in a manner that substitutes for a petroleum product made from new oil.

(4) "Rerefining" means the use of refining processes on used oil to produce high-quality base stocks for lubricants or other petroleum products. Rerefining may include distillation, hydrotreating, or treatments employing acid caustic, solvent, clay, or other chemicals, or other physical treatments other than those used in reclaiming.

(5) "Used oil" means any oil which has been refined from crude oil or synthetic oil and, as a result of use, storage, or handling, has become unsuitable for its original purpose due to the presence of impurities or loss of original properties, but which may be suitable for further use and is economically recyclable.

(6) "Used oil recycling facility" means any facility that recycles more than 10,000 gallons of used oil annually. (1969, c. 899; 1975, c. 311, s. 2; 1977, 2nd Sess., c. 1216; 1979, c. 464, s. 1; 1981, c. 704, s. 4; 1983, c. 795, ss. 1, 8.1; c. 891, s. 2; 1983 (Reg. Sess., 1984), c. 973, s. 2; 1985, c. 738, s. 1; 1987, c. 574, s. 1; 1987 (Reg. Sess., 1988), c. 1020, s. 1; c. 1058, s. 1; 1989, c. 168, s. 11; c. 742, s. 5; c. 784, s. 1; 1991 c. 342, s. 7; c. 621, s. 1; 1991 (Reg. Sess., 1992), c. 1013, s. 7.)

Part 2. Solid and Hazardous Waste Management.

GS 130A-291. Division of Waste Management.

(a) For the purpose of promoting and preserving an environment that is conducive to public health and welfare, and preventing the creation of nuisances and the depletion of natural resources, the Department shall maintain a Division of Waste Management to promote sanitary processing, treatment, disposal and statewide management of solid waste and the greatest possible recycling and recovery of resources, and the Department shall employ and retain qualified personnel as may be necessary to effect such purposes. It is the purpose and intent of the State to be and remain cognizant not only of its responsibility to authorize and establish a statewide solid waste management program, but also of its responsibility to monitor and supervise through the Department, the activities and operations of units of local government implementing a permitted solid waste management facility serving a specified geographic area in accordance with a solid waste management plan.

(b) In furtherance of this purpose and intent, it is hereby determined and declared that it is necessary for the health and welfare of the inhabitants of the State that solid waste management facilities permitted hereunder and serving a specified geographic area shall be used by public or private owners or occupants of all lands, buildings, and premises within the geographic area, and a unit of local government may, by ordinance, require that all solid waste generated within the geographic area and placed in the waste stream for disposal, shall be delivered to the permitted solid waste management facility or facilities serving the geographic area. Actions taken pursuant to this Article shall be deemed to be acts of the sovereign power of the State of North Carolina, and to the extent reasonably necessary to achieve the purposes of this section, a unit of local government may displace competition with public service for solid waste management and disposal. It is further determined and declared that no person, firm, corporation, association or entity within said geographic area shall engage in any activities which would be competitive with this purpose or with ordinances, rules adopted pursuant to the authority granted herein.

GS 130A-291.1 Septage Management Program.

(a) The Department shall establish and administer a septage management program in accordance with the provisions of this section.

(b) For the protection of the public health, the Commission shall adopt rules governing the management of septage. The rules shall include, but not be limited to, criteria for the sanitary management of septage, including standards for transportation, storage, treatment and disposal; issuance, suspension and revocation of permits; and procedures for payment of annual fees.

(c) No septage management firm shall commence or continue operation that does not have a permit issued by the Department. The permit shall be issued only when the septage management firm satisfies all of the requirements of the rules adopted by the Commission.

(d) Septage shall be treated and disposed only at a wastewater system that has been approved by the Department under rules adopted by the Commission or by the Environmental Management Commission or at a site that is permitted by the Department under this section. A permit shall be issued only if the site satisfies all of the requirements of the rules adopted by the Commission.

(e) A septage management firm that operates one pumper truck shall pay an annual fee of three hundred dollars ($300.00) to the Department. A septage management firm that operates two or more pumper trucks shall pay an annual fee of four hundred dollars ($400.00) to the Department. The fee is due by January 1 of each year.

Fees collected under this subsection shall be applied only to the costs of the septage management program.

(f) All wastewater systems designed to discharge effluent to the surface waters may accept, treat and dispose septage from permitted septage management firms, unless acceptance of the septage would constitute a violation of the permit conditions of the wastewater system. The wastewater system may charge a reasonable fee for acceptance, treatment, and disposal of septage.
(1987 Reg. Sess., 1988), c.1058, s.2.); 1991 (Reg. Sess., 1992), c.1039, s.8; 1993, c.173, s.4.)

GS 130A-292. Conveyance of land used for commercial hazardous waste disposal facility to the State.

(a) No land may be used for a commercial hazardous waste disposal facility until the simple title to the land has been conveyed to this State. In consideration for the conveyance, the State shall enter into a lease agreement with the grantor for a term equal to the estimated life of the facility in which the State will be the lessor and the grantor the lessee. The lease agreement shall specify that for an annual rent of fifty dollars ($50.00), the lessee shall be allowed to use the land for the development and operation of a hazardous waste disposal facility. The lease agreement shall provide that the lessor or any person authorized by the lessor shall at all times have the right to enter without a search warrant or permission of the lessee upon any and all parts of the premises for monitoring, inspection and all other purposes necessary to carry out the provisions of this Article. The lessee shall remain fully liable for all damages, losses, personal injury or property damage which may result or arise out of the lessee's operation of the facility, and for compliance with regulatory requirements concerning insurance, bonding for closure and post-closure costs, monitoring and other financial or health and safety requirements as required by applicable law and rules. The State, as lessor, shall be immune from liability except as otherwise provided by statute. The lease shall be transferable with the written consent of the lessor and the consent will not be unreasonably withheld. In the case of a transfer of the lease, the transferee shall be subject to all terms and conditions that the State deems necessary to ensure compliance with applicable laws and rules. If the lessee or any successor in interest fails in any material respect to comply with any applicable law, rule or permit condition, or with any term or condition of the lease, the State may terminate the lease after giving the lessee written notice specifically describing the failure to comply and upon providing the lessee a reasonable time to comply. If the lessee does not effect compliance within the reasonable time allowed, the State may reenter and take possession of the premises.

(b) Notwithstanding the termination of the lease by either the lessee or the lessor for any reason, the lessee shall remain liable for, and be obligated to perform, all acts necessary or required by law, rule, permit condition or the lease for the permanent closure of the site until the site has either been permanently closed or until a substituted operator has been secured and has assumed the obligations of the lessee.

(c) In the event of changes in laws or rules applicable to the facility which make continued operation by the lessee impossible or economically infeasible, the lessee shall have the right to terminate the lease upon giving the State reasonable notice of not less than six months, in which case the lessor shall have the right to secure a substitute lessee and operator.

(d) In the event of termination of the lease by the lessor as provided in subsection (a) of this section, or by the lessee as provided in subsection (c) of this section, the lessee shall be paid the fair market value of any improvements made to the leased premises less the costs to the lessor resulting from termination of the lease and securing a substitute lessee and operator. However, the lessor shall have no obligation to secure a substitute lessee or operator and may require the lessee to permanently close the facility.

GS 130A-293. Local ordinances prohibiting hazardous waste facilities invalid; petition to preempt local ordinance.

(a) It is the intent of the General Assembly to maintain a uniform system for the management of hazardous waste and to place limitations upon the exercise by all units of local government in North Carolina of the power to regulate the management of hazardous waste by means of special, local, or private acts or resolutions, ordinances, property restrictions, zoning regulations, or otherwise. Notwithstanding any authority granted to counties, municipalities or other local authorities to adopt local ordinances (including but not limited to those imposing taxes, fees, or charges or regulating health, environment, or land use), any local ordinance that prohibits or has the effect of prohibiting the establishment or operation of a hazardous waste facility which the Secretary has preempted pursuant to subsections (b) through (f) of this section, shall be invalid to the extent necessary to effectuate the purposes of this Chapter or Chapter 130B of the General Statutes. To this end, all provisions of special, local, or private acts or resolutions are repealed which:

(1) Prohibit the transportation, treatment, storage or disposal of hazardous waste within any county, city, or other political subdivision;

(2) Prohibit the siting of a hazardous waste facility within any county, city, or other political subdivision;

(3) Place any restriction or condition not placed by Article 9 of Chapter 130A or Chapter 130B of the General Statutes upon the transportation, treatment, storage or disposal of hazardous waste or upon the siting of a hazardous waste facility within any county, city, or other political subdivision; or

(4) In any manner are in conflict or inconsistent with the provisions of Article 9 of Chapter 130A or Chapter 130B of the General Statutes.

No special, local, or private acts or resolutions enacted or taking effect hereafter may be construed to modify, amend, or repeal any portion of Article 9 of Chapter 130A or Chapter 130B of the General Statutes unless it expressly provides for such by specific references to the appropriate section of this Part. Further to this end, all provisions of local ordinances, including those regulating land use, adopted by counties, municipalities, or other local authorities that prohibit or have the effect of prohibiting the establishment or operation of a hazardous waste facility are invalidated to the extent preempted by the Secretary pursuant to this Section.

(b) When a hazardous waste facility would be prevented from construction or operation by a county, municipal, or other local ordinance(s), the operator of the proposed facility or the North Carolina Hazardous Waste Management Commission established pursuant to Chapter 130B of the General Statutes (hereinafter "the Commission") may petition the Secretary to review the matter. After receipt of a petition, the Secretary shall hold a hearing in accordance with the procedures in subsection (c) of this section and shall determine whether or to what extent to preempt the local ordinance to allow for the establishment and operation of the facility.

(c) When a petition described in subsection (b) of this section has been filed with the Secretary, the Secretary shall hold a public hearing to consider the petition. Such hearing shall be held in the affected locality within 60 days after receipt of the petition by the Secretary. The Secretary shall give notice of the public hearing by:

(1) Publication in a newspaper or newspapers having general circulation in the county or counties where the facility is or is to be located or operated, once a week for three consecutive weeks, the first notice appearing at least 30 days prior to the scheduled date of the hearing; and

(2) First class mail to persons who have requested such notice. The Secretary shall maintain a mailing list of persons who request notice in advance of the hearing pursuant to this section. Notice by mail shall be complete upon deposit of a copy of the notice in a post-paid wrapper addressed to the person to be notified at the address which appears on the mailing list maintained by the Board, in a post office or official depository under the exclusive care and custody of the United States Postal Service.

Any interested person may appear before the Secretary at the hearing to offer testimony. In addition to testimony before the Secretary, any interested person may submit written evidence to the Secretary for its consideration. At least 20 days shall be allowed for receipt of written comment following the hearing.

(d) The Secretary shall determine whether or to what extent to preempt local ordinance(s) so as to allow for the establishment and operation of the facility no later than 60 days after conclusion of the hearing. The Secretary shall preempt a local ordinance only if it makes all five of the following findings:

(1) That there is a local ordinance which would prohibit or have the effect of prohibiting the establishment or operation of a hazardous waste facility;

(2) That the proposed facility is needed in order to establish adequate capability to meet the current or projected hazardous waste management needs of this State or to comply with the terms of any interstate agreement for the management of hazardous waste to which the State is a party and therefore serves the interests of the citizens of the State as a whole;

(3) That all legally required State and federal permits or approvals have been issued by the appropriate State and federal agencies or that all State and federal permit requirements have been satisfied and that the permits or approvals have been denied or withheld only because of the local ordinance(s);

(4) That local citizens and elected officials have had adequate opportunity to participate in the siting process; and

(5) That the construction and operation of the facility will not pose an unreasonable health or environmental risk to the surrounding locality and that the facility operator or the Commission has taken or consented to take reasonable measures to avoid or manage foreseeable risks and to comply to the maximum feasible extent with any applicable local ordinance(s).

If the Secretary does not make all five findings set out above, the Secretary shall not preempt the challenged local ordinance(s). The Secretary's decision shall be in writing and shall identify the evidence submitted to the Secretary plus any additional evidence used in arriving at the decision.

(e) The decision of the Secretary shall be final unless a party to the action shall, pursuant to Article 4 of Chapter 150B of the General Statutes as modified by G.S. 7A-29 and this section, files a written appeal within 30 days of the date of such decision. The record on appeal shall consist of all materials and information submitted to or considered by the Secretary, the Secretary's written decision, a complete transcript of the hearing, all written material presented to the Secretary regarding the location of the facility, the specific findings required by subsection (d) of this section, and any minority positions on the specific findings required by subsection (d) of this section. The scope of judicial review shall be that the court may affirm the decision of the Secretary, or may remand the matter for further proceedings, or may reverse or modify the decision if the substantial rights of the parties may have been prejudiced because the agency findings, inferences, conclusions, or decisions are:

(1) In violation of constitutional provisions; or

(2) In excess of the statutory authority or jurisdiction of the agency; or

(3) Made upon unlawful procedure; or

(4) Affected by other error of law; or
(5) Unsupported by substantial evidence admissible under G.S. 150B-29(a) or G.S. 150B-30 in view of the entire record as submitted; or
(6) Arbitrary or capricious.

If the court reverses or modifies the decision of the agency, the judge shall set out in writing, which writing shall become part of the record, the reasons for such reversal or modification.

(f) In computing any period of time prescribed or allowed by this procedure, the provisions of Rule 6(a) of the Rules of Civil Procedure, G.S. 1A-1, shall apply.

(g) Repealed by Session Laws 1989, c.168, s. 13, effective May 30, 1989. (1981, c. 704, s. 5; 1983, s. 891, s. 2; 1983 (Reg. Sess., 1984), c. 973, ss. 3-5; 1987, c. 827, s. 249; 1987 (Reg. Sess., 1988), c. 993, s. 28; c. 1082, s. 13, 1989, c. 168, s. 13.)

GS 130A-294. Solid waste management program.

(a) The Department is authorized and directed to engage in research, conduct investigations and surveys, make inspections and establish a statewide solid waste management program. In establishing a program, the Department shall have authority to:

(1) Develop a comprehensive program for implementation of safe and sanitary practices for management of solid waste;

(2) Advise, consult, cooperate and contract with other State agencies, units of local government, the federal government, industries and individuals in the formulation and carrying out of a solid waste management program;

(3) Develop and adopt rules to establish standards for qualification as a "recycling, reduction or resource recovering facility" or as waste "recycling, reduction or resource recovery equipment" for the purpose of special tax classifications or treatment, and to certify as qualifying those applicants which meet the established standards. The standards shall be developed to qualify only those facilities and equipment exclusively used in the actual recycling, reduction or resource recovering process and shall exclude any incidental or supportive facilities and equipment;

(4)a Develop a permit system governing the establishment and operation of solid waste management facilities. No application for a new permit, the renewal of a permit, or a substantial amendment to a permit shall be granted for a sanitary landfill, excluding demolition landfills as defined in the rules of the Commission for Health Services, without the Department receiving the prior approval for the new permit, renewal of the permit, or substantial amendment to the permit from the county where it is to be located, except if it is to be located within the corporate limits or extraterritorial jurisdiction under Article 19 of Chapter 160A of the General Statutes, of a city as defined in G.S. 160A-1(2), from the city where it is to be located or whose jurisdiction it is in. No permit shall be granted for a solid waste management facility having discharges which are point sources until the Department has referred the complete plans and specifications to the Environmental Management Commission and has received advice in writing that the plans and specifications are approved in accordance with the provisions of G.S. 143-215.1. If the applicant is a unit of local government, and has not submitted a solid waste management plan that has been approved by the Department pursuant to G.S. 130A-309.09(A)(b), the Department may deny a permit for a sanitary landfill or a facility that disposes of solid waste by incineration, unless the Commission has not adopted rules pursuant to G.S. 130A-309.29 for local solid waste management plans. In any case where the Department denies a permit for a solid waste management facility, it shall state in writing the reason for denial and shall also state its estimate of the changes in the applicant's proposed activities or plans which will be required for the applicant to obtain a permit.

b.(NOTE See the General Statutes of North Carolina).

(4a) No permit shall be granted for any public or private sanitary landfill to receive solid non-radioactive waste generated outside the boundaries of North Carolina to be deposited, unless such waste has previously been inspected by the solid waste regulatory agency of that nation, state or territory, characterized in detail as to its contents and certified by that agency to be non-injurious to health and safety. The Commission shall adopt rules to implement this subsection.

(5) Repealed by Session Laws 1983, c. 795, s. 3.

(5a) Designate a geographic area within which the collection, transportation, storage and disposal of all solid waste generated within said area shall be accomplished in accordance with a solid waste management plan. Such designation may be made only after the Department has received a request from the unit or units of local government having jurisdiction within said geographic area that such designation be made and after receipt by the Department of a solid waste management plan which shall include:

a. The existing and projected population for such area;
b. The quantities of solid waste generated and estimated to be generated in such area;
c. The availability of sanitary landfill sites and the environmental impact of continued landfill of solid waste on surface and subsurface waters;
d. The method of solid waste disposal to be utilized and the energy or material which shall be recovered from the waste; and
e. Such other data that the Department may reasonably require.

(5b) Authorize units of local government to require by ordinance, that all solid waste generated within the designated geographic area that is placed in the waste stream for disposal be collected, transported, stored and disposed of at a permitted solid waste management facility or facilities serving such area. The provisions of such ordinance shall not be construed to prohibit the source separation of materials from solid waste prior to collection of such solid waste for disposal or prohibit collectors of solid waste from recycling materials or limit access to such materials as an incident to collection of such solid waste; provided such prohibitions do not authorize the construction and operation of a resource recovery facility unless specifically permitted pursuant to an approved solid waste management plan. If a private solid waste landfill shall be substantially affected by such ordinance then the unit of local government adopting the ordinance shall be required to give the operator of the affected landfill at least two years written notice prior to the effective date of the proposed ordinance.

(5c) Except for the authority to designate a geographic area to be serviced by a solid waste management facility, delegate authority and responsibility to units of local government to perform all or a portion of a solid waste management program within the jurisdictional area of the unit of local government; provided that no authority over or control of the operations or properties of one local government shall be delegated to any other local government.

(5d) Require that an annual report of the implementation of the solid waste management plan within the designated geographic area be filed with the Department.

(6) The Department is authorized to charge and collect fees from operators of hazardous waste disposal facilities. The fees shall be used to establish a fund sufficient for each individual facility to defray the anticipated costs to the State for monitoring and care of the facility after the termination of the period during which the facility operator is required by applicable State and federal statutes, regulations or rules to remain responsible for post-closure monitoring and care. In establishing the fees, consideration shall be given to the size of the facility, the nature of the hazardous waste and the projected life of the facility.

(7) Establish and collect annual fees from generators and transporters of hazardous waste, and from storage, treatment, and disposal facilities regulated under this Article as provided in G.S. 130A-294.1.

(b) The Commission shall adopt and the Department shall enforce rules to implement a comprehensive statewide solid waste management program. The rules shall be consistent with applicable State and federal law; and shall be designed to protect the public health, safety, and welfare; preserve the environment; and provide for the greatest possible conservation of cultural and natural resources. Rules for the establishment, location, operation, maintenance, use, discontinuance, recordation, post-closure care of solid waste management facilities also shall be based upon recognized public health practices and procedures, including applicable epidemiological research and studies; hydrogeological research and studies; sanitary engineering research and studies; and current technological development in equipment and methods. The rules shall not apply to the management of solid waste that is generated by an individual or individual facilily or household unit on the individual's property and is disposed of on the individual's property.

The Commission shall adopt rules for financial responsibility to ensure the availability of sufficient funds for closure and post-closure maintenance and monitoring at solid waste management facilities, and for any corrective action the Department may require during the active life of a facility or during the closure and post-closure periods. The rules may permit demonstration of financial responsibility through the use of a letter of credit, insurance, surety, trust agreement, financial test, or guarantee by corporate parents or third parties who can pass the financial test. The rules shall require that an owner or operator of a privately owned solid waste management facility demonstrate financial responsibility by a method or combinations of methods that will ensure that sufficient funds for closure, post-closure maintenance and monitoring, and any corrective action that the Department may require will be available during the active life of the facility, at closure, and for a period of not less than 30 years after closure even if the owner or operator becomes insolvent or ceases to reside, be incorporated, do business, or maintain assets in the State.

(b1), (a)(1), (a)(2) and (3): See the General Statutes of North Carolina, GS 130A-294.

(c) The Commission shall adopt and the Department shall enforce rules concerning the management of hazardous waste. These rules shall establish a complete and integrated regulatory scheme in the area of hazardous waste management and shall provide for:

(1) Establishing criteria for hazardous waste, identifying the characteristics of hazardous waste and listing particular hazardous waste;

(1a) Establishing criteria for hazardous constituents, identifying the characteristics of hazardous constituents and listing particular hazardous constituents;

(2) Record-keeping and reporting by generators and transporters of hazardous waste and owners and operators of hazardous waste facilities;

(3) Proper labeling of hazardous waste containers;

(4) Use of appropriate containers for hazardous waste;

(5) A manifest system to assure that all hazardous waste is designated for treatment, storage or disposal at a hazardous waste facility to which a permit has been issued;

(6) Proper transportation of hazardous waste;

(7) Treatment, storage and disposal standards of performance and techniques to be used by hazardous waste facilities;
(8) Location, design, ownership and construction of hazardous waste facilities; provided, however, that no hazardous waste disposal facility or polychlorinated biphenyl disposal facility shall be located within 25 miles of any other hazardous waste disposal facility or polychlorinated biphenyl disposal facility;
(9) Plans to minimize unanticipated damage from treatment, storage or disposal of hazardous waste; and a plan or plans providing for the establishment and/or operation of one or more hazardous waste facilities in the absence of adequate approved hazardous waste facilities established or operated by any person within the State;
(10) Proper maintenance and operation of hazardous waste facilities, including requirements for ownership by any person or the State, financial responsibility (including requirements for sufficient availability of funds for facility closure and post-closure monitoring and corrective measures through the use of a letter of credit, insurance, surety, trust agreement, financial test, or financial test and corporate guarantee), training of personnel, continuity of operation and procedures for establishing and maintaining hazardous waste facilities;
(11) Monitoring by owners or operators of hazardous waste facilities;
(12) Inspection or copying of records required to be kept;
(13) Obtaining and analyzing hazardous waste samples and samples of hazardous waste containers and labels from generators and transporters and from owners and operators of hazardous waste facilities;
(14) A permit system governing the establishment and operation of hazardous waste facilities;
(15) Additional requirements as necessary for the effective management of hazardous waste;
(16) The operator of the hazardous waste disposal facility shall maintain adequate insurance to cover foreseeable claims arising from the operation of the facility. The Department shall determine what constitutes an adequate amount of insurance;
(17) The bottom of a hazardous waste disposal facility shall be at least 10 feet above the seasonal high water table and more when necessary to protect the public health and the environment; and
(18) The operator of a hazardous waste disposal facility shall make monthly reports to the board of county commissioners of the county in which the facility is located on the kinds and amounts of hazardous wastes in the facility.

(d) The Commission is authorized to adopt and the Department is authorized to enforce rules where appropriate for public participation in the consideration, development, revision, implementation and enforcement of any permit rule, guideline, information or program under this Article.

(e) Rules adopted under this section may incorporate standards and restrictions which exceed and are more comprehensive than comparable federal regulations.

(f) Within 10 days of receiving an application for a permit or for an amendment to an existing permit for a hazardous waste facility, the Department shall notify the clerk of the board of commissioners of the county or counties in which the facility is proposed to be located or is located and, if the facility is proposed to be located or is located within a city, the clerk of the governing board of the city that the application has been filed, and shall file a copy of the application with the clerk. Prior to the issuance of a permit or an amendment of an existing permit the Secretary or his designee shall conduct a public hearing in the county or in one of the counties in which the hazardous waste facility is proposed to be located or is located. The Secretary or his designee shall give notice of the hearing, and the public hearing shall be in accordance with applicable federal regulations adopted pursuant to RCRA and with Chapter 150B of the General Statutes. Where the provisions of the federal regulations and Chapter 150B of the General Statutes are inconsistent, the federal regulations shall apply.

(g) The Commission shall develop and adopt standards for permitting of hazardous waste facilities. Such standards shall be developed with, and provide for, public participation; shall be incorporated into rules; shall be consistent with all applicable federal and State law, including statutes, regulations and rules; shall be developed and revised in light of the best available scientific data; and shall be based on consideration of at least the following factors:
(1) Hydrological and geological factors, including flood plains, depth to water table, groundwater travel time, soil pH, soil cation exchange capacity, soil composition and permeability, cavernous bedrock, seismic activity, slope, mines, and climate;
(2) Environmental and public health factors, including air quality, quality of surface and groundwater, and proximity to public water supply watersheds;
(3) Natural and cultural resources, including wetlands, gamelands, endangered species habitats, proximity to parks, forests, wilderness areas, nature preserves, and historic sites;
(4) Local land uses;
(5) Transportation factors, including proximity to waste generators, route safety, and method of transportation;
(6) Aesthetic factors, including the visibility, appearance, and noise level of the facility;
(7) Availability and reliability of public utilities; and
(8) Availability of emergency response personnel and equipment.

(h) Rules adopted by the Commission shall be subject to the following requirements:
  (1) Repealed by Session Laws 1989, c. 168, s. 20, effective May 30, 1989.
  (2) Hazardous waste shall be treated prior to disposal in North Carolina. The Commission shall determine the extent of waste treatment required before hazardous waste can be disposed of in a hazardous waste disposal facility.
  (3) Any hazardous waste disposal facility hereafter constructed in this State shall meet, at the minimum, the standards of construction imposed by federal regulations adopted under the RCRA at the time the permit is issued.
  (4) No hazardous waste disposal facility or polychlorinated biphenyl disposal facility shall be located within 25 miles of any other hazardous waste disposal facility or polychlorinated biphenyl disposal facility.
  (5) No hazardous waste [disposal] facility operated pursuant to Chapter 130B of the General Statutes shall be located within 25 miles of a polychlorinated biphenyl landfill facility.
  (6) The following shall not be disposed of in a hazardous waste disposal facility: ignitables as defined in the RCRA, polyhalogenated biphenyls of 50 ppm or greater concentration, and free liquids whether or not containerized.
  (7) Facilities for disposal or long-term storage of hazardous waste shall have at a minimum the following: a leachate collection and removal system above an artificial impervious liner of at least 30 mils in thickness, a minimum of five feet of clay or clay-like liner with a maximum permeability of 1.0×10^{-7} centimeters per second (cm/sec) below said artificial liner, and a leachate detection system immediately below the clay or clay-like liner.
  (8) Hazardous waste shall not be stored at a hazardous waste treatment facility for over 90 days prior to treatment or disposal.
  (9) The Commission shall consider any hazardous waste treatment process proposed to it, if the process lessens treatment cost or improves treatment over then current methods or standards required by the Commission.
  (10) Prevention, reduction, recycling, and detoxification of hazardous wastes should be encouraged and promoted. Hazardous waste disposal facilities and polychlorinated biphenyl disposal facilities shall be detoxified as soon as technology which is economically feasible is available and sufficient money is available without additional appropriation.

(i) The Department shall develop a comprehensive hazardous waste management plan for the State. This plan shall be completed by July 1, 1990 and shall be revised at two-year intervals thereafter. The Department shall make recommendations to the Governor, cognizant State agencies, and the General Assembly on ways to: improve waste management; reduce the amount of waste generated; maximize resource recovery, reuse, and conservation; and minimize the amount of hazardous waste which must be disposed of.

(j) The Commission may adopt rules for financial responsibility (including requirements for sufficient availability of funds for facility closure and postclosure monitoring and corrective measures, and for potential liability for sudden and nonsudden accidental occurrences), which may permit the use of insurance, financial tests, third-party guarantees by persons who can pass the financial test, guarantees by corporate parents who can pass the financial test, irrevocable letters of credit, trusts, surety bonds, or any other financial device, or any combination of the foregoing, shown to provide protection equivalent to the financial protection that would have been provided by insurance if insurance were the only mechanism used. Any direct or indirect parent corporation or other parent entity of the operator of a commercial hazardous waste treatment facility shall be deemed to be a guarantor of payment by the operator for closure, monitoring, and corrective measures and for liability incurred by the operator arising from the operation of the commercial hazardous waste treatment facility. The Department may provide a copy of any filing to meet the financial responsibility requirements to the State Treasurer, who shall review the filing and provide written comments on the equivalency of protection provided by the filing, including recommended changes.

(k) Each person who generates hazardous waste who is required to pay a fee under G.S. 130A-294.1, and each operator of a hazardous waste treatment facility which treats waste generated on-site who is required to pay a fee under G.S. 130A-294.1, shall submit to the Department at the time such fees are due, a written description of any program to minimize or reduce the volume and quantity or toxicity of such waste.

(l) Disposal of solid waste in or upon water in a manner that results in solid waste entering waters or lands of the State is unlawful. Nothing herein shall be interpreted to affect disposal of solid waste in a permitted landfill.

(m) Demolition debris consisting of used asphalt or used asphalt mixed with dirt, sand, gravel, rock, concrete, or similar nonhazardous material may be used as fill and need not be disposed of in a permitted landfill or solid waste disposal facility. Such demolition debris may not be placed in the waters of the State or at or below the seasonal high water table.

(n) The Department shall encourage research and development and disseminate information on state-of-the-art means of handling and disposing of hazardous waste. The Department may establish a waste information exchange for the State.

(o) The Department shall promote public education and public involvement in the decision-making process for the siting and permitting of proposed hazardous waste facilities. The Department shall assist localities in which facilities are proposed in collecting and receiving information relating to the suitability of the proposed site. At the request of a local government in which facilities are proposed, the Department shall direct the appropriate agencies of State government to develop such relevant data as that locality shall reasonsbly request.

(p) The Department shall each year recommend to the Governor a recipient for a "Governor"s Award of Excellence" which the Governor shall award for outstanding achievement by an industry or company in the area of waste management.
(q) The Secretary shall, at the request of the Governor and under the Governor's direction, assist with the negotiation of interstate agreements for the management of hazardous waste.
(r) The Commission for Health Services shall, in accordance with procedures set forth in G.S. 160A-211.1 and G.S. 153A-152.1, review upon appeal specific privilege license tax rates which localities may apply to waste management facilities in their jurisdiction.
(s) The Department is authorized to enter upon any lands and structures upon lands to make surveys, borings, soundings, and examinations as may be necessary to determine the suitability of a site for a hazardous waste facility or hazardous waste disposal facility. The Department shall give 30 days' notice of the intended entry authorized by this section in the manner prescribed for service of process by G.S. 1A-1, Rule 4. Entry under this section shall not be deemed a trespass or taking; provided, however, that the Department shall make reimbursement for any damage to such land or structures caused by such activities. This authority shall also apply to the North Carolina Hazardous Waste Management Commission."

GS 130A-294.1. Fees applicable to generators and transporters of hazardous waste, and to hazardous waste storage, treatment, and disposal facilities.

Editor's Note.--Session Laws 1996, Second Extra Session, c. 18, s. 27.10, provides: "Beginning in 1997, the Department of Environment, Health and Natural Resources shall report on the generation, storage, treatment, and disposal of hazardous waste in North Carolina no more often than it is required to report under federal law or federal regulation."

Session Laws 1996, second Extra Session, c.18,s.1.1, provides: "This act shall be known as the current Operations Appropriations Act of 1996."

Session Laws 1996, Second Extra Session, c. 18, s.29.2, provides: "Except for statutory changes or other provisions that clearly indicate an intention to have effects beyond the 1996-97 fiscal year, the textual provisions of this act apply only to funds appropriated for, and activities occurring during, the 1996-97 fiscal year."

(a) It is the intent of the General Assembly that the fee system established by this section is solely to provide funding in addition to federal and State appropriations to support the State's hazardous waste management program.
(b) Funds collected pursuant to this section shall be used for personnel and other resources necessary to:
  (1) Provide a high level of technical assistance and waste minimization effort for the hazardous waste management program;
  (2) Provide timely review of permit applications;
  (3) Insure that permit decisions are made on a sound technical basis and that permit decisions incorporate all conditions necessary to accomplish the purposes of this Part;
  (4) Improve monitoring and compliance of the hazardous waste management program;
  (5) Increase the frequency of inspections;
  (6) Provide chemical, biological, toxicological, and analytical support for the hazardous waste management program; and
  (7) Provide resources for emergency response to imminent hazards associated with the hazardous waste management program.
(c) It is the intent of the General Assembly that the total funds collected per year pursuant to this section not exceed thirty percent (30%) of the total funds budgeted from all sources for the hazardous waste management program. This subsection shall not be construed to limit the obligation of any person to pay any fee imposed by this section.
(d) The Hazardous Waste Management Account is established as a nonreverting account within the Department. All fees collected under this section shall be credited to the Account and shall be used for the purposes listed in subsection (b).
(e) A person who generates either one kilogram or more of any acute hazardous waste as listed in 40 C.F.R. Section 261.30(d) or Section 261.33(e) as revised 1 July 1987, or 1000 kilograms or more of hazardous waste, in any calendar month during the year beginning 1 July and ending 30 June shall pay an annual fee of five hundred dollars ($500.00).
(f) A person who generates 100 kilograms or more of hazardous waste in any calendar month during the year beginning 1 July and ending 30 June but less than 1000 kilograms of hazardous waste in each calendar month during that year shall pay an annual fee of twenty-five dollars ($25.00).
(g) A person who generates one kilogram or more of acute hazardous waste or 1000 kilograms or more of hazardous waste in any calendar month during the calendar year shall pay, in addition to any fee under subsections (e) and (f) of this section, a tonnage fee of fifty cents ($0.50) per ton or any part thereof of hazardous waste generated during that year up to a maximum of 25,000 tons.
(h) A person who generates less than one kilogram of acute hazardous waste and less than 100 kilograms of hazardous waste in each calendar month during the year beginning 1 July and ending 30 June shall not be liable for payment of a fee under subsections (e) and (f) of this section for that year.
(i) Hazardous waste generated as a result of any type of remedial action or by collection by a local government of hazardous waste from households shall not be subject to a tonnage fee under subsection (g) and (l) of this section.
(j) A person who transports hazardous waste shall pay an annual fee of six hundred dollars ($600.00).

(k) A storage, treatment, or disposal facility shall pay an annual activity fee of one thousand two hundred dollars ($1,200) for each activity.

(l) A commercial hazardous waste storage, treatment, or disposal facility shall pay annually, in addition to the fees applicable to all hazardous waste storage, treatment, or disposal facilities, a single tonnage charge of one dollar and seventy-five cents ($1.75) per ton or any part thereof of hazardous waste stored, treated, or disposed of at the facility. A manufacturing facility that receives hazardous waste generated from the use of a product typical of its manufacturing process for the purpose of recycling is exempt from this tonnage charge. A facility must have a permit issued under this Article which includes the recycling activity and specifies the type and amount of waste allowed to be received from off-site for recycling.

(m) An applicant for a permit for a hazardous waste storage, treatment, or disposal facility that proposes to operate as a commercial facility shall pay an application fee for each proposed activity as follows:

(1)	Storage facility	$10,000;
(2)	Treatment facility	$15,000;
(3)	Disposal facility	$25,000.

(n) The Commission may adopt rules setting fees for modifications to permits. Such fees shall not exceed fifty percent (50%) of the application fee.

(o) Annual fees established under this section are due no later than 31 July for the fiscal year beginning 1 July in the same year. Tonnage fees established under this section are due no later than 31 July for the previous calendar year.

(p) The Department shall make an annual report to the General Assembly and its Fiscal Research Division on the cost of the hazardous waste management program. The report shall include, but is not limited to, beginning fund balance, fees collected under this section, anticipated revenue from all other sources, total expenditures (by activities and categories) for the hazardous waste management program, ending fund balance, any recommended adjustments in the annual and tonnage fees which may be necessary to assure the continued availability of funds sufficient to pay the State's share of the cost of the hazardous waste management program, and any other information requested by the General Assembly. In recommending adjustments in annual and tonnage fees, the Department may propose fees for hazardous waste generators, and for hazardous waste treatment facilities which treat waste generated on-site, which are designed to encourage reductions in the volume or quantity and toxicity of hazardous waste.

GS 130A-295. Additional requirements for hazardous waste facilities.

(a) An applicant for a permit for a hazardous waste facility shall satisfy the Department that:
  (1) Any hazardous waste facility constructed or operated by the applicant, or any parent or subsidiary corporation if the applicant is a corporation, has been operated in accordance with sound waste management practices and in substantial compliance with federal and state laws, regulations and rules; and
  (2) The applicant, or any parent or subsidiary corporation if the applicant is a corporation, is financially qualified to operate the proposed hazardous waste facility.

(b) An applicant for a permit for a hazardous waste facility shall satisfy the Department that he has met the requirements of subsection (a) of this section before the Department is required to otherwise review the application. In order to continue to hold a permit under this Chapter, a permittee must remain financially qualified and must provide any information requested by the Department to demonstrate that he continues to be financially qualified.

(c) No permit for any new commercial hazardous waste treatment, storage, or disposal facility shall be issued or become effective, and no permit for a commercial hazardous waste treatment, storage, or disposal facility shall be modified until the applicant has satisfied the Department that such facility is needed to meet the current or projected hazardous waste management needs of this State or to comply with the terms of any interstate agreement for the management of hazardous waste to which the State is a party. The Commission shall adopt rules to implement this subsection.

GS 130A-295.01. Additional Requirement for Commercial Hazardous Waste Treatment Facilities.

(a) As used in this section:

  (1) "Commercial hazardous waste treatment facility" means any hazardous waste treatment facility which accepts hazardous waste from the general public or from another person for a fee, but does not include any facility owned or operated by a generator of hazardous waste solely for his own use, and does not include any facility owned by the State or by any agency or subdivision thereof solely for the treatment of hazardous waste generated by agencies or subdivisions of the State;
  (2) "New" when used in connection with "facility" refers to a planned or proposed facility, or a facility which has not been placed in operation, but does not include facilities which have commenced operations as of the date this section became effective, including facilities operated under interim status;

(3) "Modified" when used in connection with "permit" means any change in any permit in force on or after the date this section becomes effective which would either expand the scope of permitted operations, or extend the expiration date of the permit or otherwise constitute a major modification of the permit as defined in Title 40, Part 270.41 of the Code of Federal Regulations (1 July 1986); and

(4) "7Q10 conditions" when used in connection with "surface water" refers to the minimum average flow for a period of seven consecutive days that has an average occurrence of once in 10 years as referenced in 15 NCAC 2B .0206(a)(3) as adopted February 1, 1976.

(b) No permit for any new commercial hazardous waste treatment facility shall be issued or become effective, and no permit for a commercial hazardous waste treatment facility shall be modified until the applicant has satisfied the Department that such facility meets, in addition to all other applicable requirements, the following requirements:

(1) The facility shall not discharge directly a hazardous or toxic substance into a surface water that is upstream from a public drinking water supply intake in North Carolina, unless there is a dilution factor of 1000 or greater at the point of discharge into the surface water under 7Q10 conditions.

(2) The facility shall not discharge indirectly through a publicly owned treatment works (POTW) a hazardous or toxic substance into a surface water that is upstream from a public drinking water supply intake in North Carolina, unless there is a dilution factor of 1000 or greater, irrespective of any dilution occurring in a wastewater treatment plant, at the point of discharge into the surface water under 7Q10 conditions.

Note: "The provisions of this act are severable. If the Administrator of the United States Environmental Protection Agency concludes: pursuant to the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. Section 6926; and Title 40, Part 271, Code of Federal Regulations, Sections 271.22 and .23, or in accordance with other appplicable law and regulations; that any provision of this act will result in the withdrawal of approval of the North Carolina Hazardous Waste program, such provision is void. The Secretary, his designee, or other State official shall, upon receipt of notice of a decision by the Administrator that any provision of this act will result in withdrawal of program approval, certify to the Secretary of State that such provision is void. In the event that any provision of this act is voided pursuant to this section, it shall be revived only upon a subsequent reversal by the Administrator of his decision based on his determination that such provision is not in conflict with Environmental Protection Agency requirements for State program approval, or upon a reversal of the Administrator's initial decision by administrative or judicial review. The voiding of any provision of this act shall not affect other provisions of the act which can be given effect without the voided provision."

GS 130A-295.02. Resident inspectors required at commercial hazardous waste facilities; recovery of costs for same.

(a) The Division shall employ full-time resident inspectors for each commercial hazardous waste facility located within the State. Such inspectors shall be employed and assigned so that at least one inspector is on duty at all times during which any component of the facility is in operation, is undergoing any maintenance or repair, or is undergoing any test or calibration. Resident inspectors shall be assigned to commercial hazardous waste management facilities so as to protect the public health and the environment, to monitor all aspects of the operation of such facilities, and to assure compliance with all laws and rules administered by the Division and by any other division of the Department. Such inspectors may also enforce laws or rules administered by any other agency of the State pursuant to an appropriate memorandum of agreement entered into by the Secretary and the chief administrative officer of such agency. The Division may assign additional resident inspectors to a facility depending upon the quantity and toxicity of waste managed at a facility, diversity of types of waste managed at the facility, complexity of management technologies utilized at the facility, the range of components which are included at the facility, operating history of the facility, and other factors relative to the need for on-site inspection and enforcement capabilities. The Division, in consultation with other divisions of the Department, shall define the duties of each resident inspector and shall determine whether additional resident inspectors are needed at a particular facility to meet the purposes of this section.

(b) The Division shall establish requirements pertaining to education, experience, and training for resident inspectors so as to assure that such inspectors are fully qualified to serve the purposes of this section. The Division shall provide its resident inspectors with such training, equipment, facilities, and supplies as may be necessary to fulfill the purposes of this section.

(c) As a condition of its permit, the owner or operator of each commercial hazardous waste facility located within the State shall provide and maintain such appropriate and secure offices and laboratory facilities as the Department may require for the use of the resident inspectors required by this section.

(d) Resident inspectors assigned to a commercial hazardous waste facility shall have unrestricted access to all operational areas of such facility at all times. For the protection of resident inspectors and the public, the provisions of G.S. 143-215.107(a)(7) and G.S. 143-215.107(f) shall not apply to commercial hazardous waste facilities to which a resident inspector is assigned.

(e) No commercial hazardous waste facility shall be operated, undergo any maintenance or repair, or undergo any testing or calibration unless an inspector employed by the Division is present at the facility.

(f) The requirements of this section are intended to enhance the ability of the Department to protect the public health and the environment by providing the Department with the authority and resources necessary to maintain a rigorous inspection and enforcement program at commercial hazardous waste management facilities. The requirements of this section are intended to be supplementary to other requirements imposed on hazardous waste facilities. This section shall not be construed to relieve either the owner or the operator of any such facility or the Department from any other requirement of law or to require any unnecessary duplication of reporting or monitoring requirements.

(g) For the purpose of enforcing the laws and rules enacted or adopted for the protection of the public health and the environment, resident inspectors employed pursuant to this section may be commissioned as special peace officers as provided in G.S. 113-28.1. The provisions of Article 1A of Chapter 113 of the General Statutes shall apply to resident inspectors commissioned as special peace officers pursuant to this subsection.

(h) The Department shall determine the full cost of the employment and assignment of resident inspectors at each commercial hazardous waste facility located within the State. Such costs shall include, but are not limited to, costs incurred for salaries, benefits, travel, training, equipment, supplies, telecommunication and data transmission, offices and other facilities other than those provided by the owner of operator, and administrative expenses. The Department shall establish and revise as necessary a schedule of fees to be assessed on the users of each such facility to recover the actual cost of the resident inspector program at that facility. The operator of each such facility shall serve as the collection agent for such fees, shall account to the Department on a monthly basis for all fees collected, and shall deposit with the Department all funds collected pursuant to this section within 15 days following the last day of the month in which such fees are collected. Fees collected under this section shall be credited to the General Fund as nontax revenue.

(i) The Division shall establish and revise as necessary a program for assigning resident inspectors to commercial hazardous waste facilities so that scheduled rotation or equivalent oversight procedures ensure that each resident inspector will maintain objectivity.

(j) For purposes of this subsection, special purpose commercial hazardous waste facilities include: a facility that manages limited quantities of hazardous waste; a facility that limits its hazardous waste management activities to reclamation or recycling, including energy or materials recovery or a facility that stores hazardous waste primarily for use at such facilities; or a facility that is determined to be low risk under rules adopted by the Commission pursuant to this subsection. The Commission shall adopt rules establishing reasonable times and frequencies for the presence of a resident inspector on less than a full-time basis at special purpose commercial hazardous waste facilities. Rules adopted pursuant to this subsection shall establish classifications of special purpose hazardous waste facilities based on factors including, but not limited to, the size of the facility, the type of treatment or storage being performed, the nature and volume of waste being treated or stored, the uniformity, similarity, or lack of diversity of the waste streams, the predictability of the nature of the waste streams and their treatability, whether the facility utilizes automated monitoring or safety devices that adequately perform functions that would otherwise be performed by a resident inspector, the fact that reclamation or recycling is being performed at the facility, and the compliance history of the facility and its operator. Special purpose commercial hazardous waste facilities shall be subject to inspection at all times during which the facility is in operation, undergoing any maintenance or repair, or undergoing any test or calibration. Rules adopted pursuant to this subsection shall specify a minimum number of inspections during such times as the facility is subject to inspection. Special purpose commercial hazardous waste facilities that utilize hazardous waste as a fuel source shall be inspected a minimum of 40 hours per week, unless compliance data for these facilities can be electronically monitored and recorded off-site by the Department. The Department, considering the benefits provided by electronic monitoring, shall determine the number of hours of on-site inspection required at these facilties. The Department shall maintain records of all inspections at special purpose commercial hazardous waste facilities. Such records shall contain sufficient detail and shall be arranged in a readily understandable format so as to facilitate determination at any time as to whether the special purpose commercial hazardous waste facility is in compliance with the requirements of this subsection and of rules adopted pursuant to this subsection.

(k) For purposes of this section, a facility that utilizes hazardous waste as a fuel or that has used hazardous waste as a fuel within the preceding calendar year, and that is an affiliate of and adjacent or contiguous to a commercial hazardous waste facility, shall be subject to inspection as a special purpose commercial hazardous waste facility under subsection (j) of this section as if the facility that utilizes hazardous waste as a fuel were a part of the commercial hazardous waste facility.

(l) As used in this section, the words "affiliate", "parent", and "subsidiary" have the same meaning as in 17 Code of Federal Regulations Section 240.12b-2 (1 April 1990 Edition).

(m) The Department shall report annually on or before 1 September to the Environmental Review Commission on the implementation of the resident inspectors program. (1989 (Reg. Sess., 1990), c.1082, s.1; 1991, c.20, s.2;c.403,s.4;c.450,s.2;1993,c.511,s.1;c.513,s.2(b); c.553,s.41.)

GS 130A-295.03 Additional requirement for hazardous waste disposal facilities; hazardous waste to be placed in containers.

(a) For purposes of this section, the term "container" means any portable device into which waste is placed for storage, transportation, treatment, disposal, or other handling, and includes the first enclosure which encompasses the waste.
(b) All hazardous waste shall be placed in containers for disposal, except as the Commission shall provide for by rule. The Commission shall adopt standards for the design and construction of containers for disposal. Standards for containers may vary for different types of waste. The standards for disposal containers may supplement or duplicate any of the performance or engineering standards for hazardous waste disposal facilities required under State or federal law; however, the performance or engineering standards for hazardous waste disposal facilities are separate and cumulative, and the performance or engineering standards for hazardous waste disposal facilities and containers may not substitute for or replace one another.

GS 130A-295.1. Limitations on permits for sanitary landfills.

Inapplicable pursuant to s. 210.

GS 130A-296. Limitations on powers of local governments.

Sec. 15. G.S. 130A-296 is repealed. Eff. 7/23/93

GS 130A-297. Receipt and distribution of funds.

The Department may accept loans and grants from the federal government and other sources for carrying out the purposes of this Article, and shall adopt reasonable policies governing the administration and distribution of funds to units of local government, other State agencies, and private agencies, institutions or individuals for studies, investigations, demonstrations, surveys, planning, training, and construction or establishment of solid waste management facilities.

GS 130A-298. Hazardous waste fund.

A nonreverting hazardous waste fund is established within the Department which shall be available to defray the cost to the State for monitoring and care of hazardous waste disposal facilities after the termination of the period during which the facility operator is required by applicable State and federal statutes, rules or regulations to remain responsible for post-closure monitoring and care. The establishment of this fund shall in no way be construed to relieve or reduce the liability of facility operators or any persons for damages caused by the facility. The fund shall be maintained by fees collected pursuant to the provisions of G.S. 130A-294(a)(6).

GS 130A-299. Single agency designation.

The Department is designated as the single State agency for purposes of RCRA or any State or federal legislation enacted to promote the proper management of solid waste.

GS 130A-300. Effect on laws applicable to water pollution control.

This Article shall not be construed as amending, repealing or in any manner abridging or interfering with those sections of the General Statutes of North Carolina relative to the control of water pollution as now administered by the Environmental Management Commission nor shall the provisions of this Article be construed as being applicable to or in any way affecting the authority of the Environmental Management Commission to control the discharges of wastes to the waters of the State as provided in Articles 21 and 21A, Chapter 143 of the General Statutes.

GS 130A-301. Recordation of permits for disposal of waste on land.

(a) Whenever the Department approves a permit for a sanitary landfill or a facility for the disposal of hazardous waste on land, the owner of the facility shall be granted both an original permit and a copy certified by the Secretary. The permit shall include a legal description of the site that would be sufficient as a description in an instrument of conveyance.

(b) The owner of a facility granted a permit for a sanitary landfill or a facility for the disposal of hazardous waste on land shall file the certified copy of the permit in the register of deeds' office in the county or counties in which the land is located.
(c) The register of deeds shall record the certified copy of the permit and index it in the grantor index under the name of the owner of the land.
(d) The permit shall not be effective unless the certified copy is filed as required under Subsection (b).
(e) When a sanitary landfill or a facility for the disposal of hazardous waste on land is sold, leased, conveyed or transferred, the deed or other instrument of transfer shall contain in the description section in no smaller type than that used in the body of the deed or instrument a statement that the property has been used as a sanitary landfill or a disposal site for hazardous waste and a reference by book and page to the recordation of the permit.

GS 130A-302. Sludge deposits at sanitary landfills.

Sludges generated by the treatment of wastewater discharges which are point sources subject to permits granted under Section 402 of the Federal Water Pollution Control Act, as amended (P.L. 92-500), or permits generated under G.S. 143-215.1 by the Environmental Management Commission shall not be deposited in or on a sanitary landfill permitted under this Article unless in compliance with the rules concerning solid waste adopted under this Article.

GS 130A-303. Imminent hazard.

(a) The judgment of the Secretary that an imminent hazard exists concerning solid waste shall be supported by findings of fact made by the Secretary.
(b) In order to eliminate an imminent hazard, the Secretary may, without notice or hearing, issue an order requiring that immediate action be taken to protect the public health or the environment. This order may be directed to a generator or transporter of solid waste or to the owner or operator of a solid waste management facility. Where the imminent hazard is caused by an inactive hazardous substance or waste disposal site, the Secretary shall follow the procedures set forth in G.S. 130A-310.5.

GS 130A-304. Confidential information protected.

(a) The following information received or prepared by the Department in the course of carrying out its duties and responsibilities under this Article is confidential information and shall not be subject to disclosure under G.S. 132-6:

    (1) Information which the Secretary determines is entitled to confidential treatment, the Secretary shall inform the person who provided the information of that determination at the time such determination is made. The Secretary may refuse to accept or may return any information that is claimed to be confidential that the Secretary determines is not entitled to confidential treatment.
    (2) Information that is confidential under any provision of federal or state law.
    (3) Information compiled in anticipation of enforcement or criminal proceedings, but only to the extent disclosure could reasonably be expected to interfere with the institution of such proceedings.

(b) Confidential information may be disclosed to officers, employees, or authorized representatives of federal or state agencies if such disclosure is necessary to carry out a proper function of the Department or the requesting agency or when relevant in any proceeding under this Article.
(c) Except as provided in subsection (b) of this section or as otherwise provided by law, any officer or employee of the State who knowingly discloses information designated as confidential under this section shall be guilty of a Class 1 misdemeanor and shall be removed from office or discharged from employment.

GS 130A-305. Construction.

This Article shall be interpreted as enabling the State to obtain federal financial assistance in carrying out its solid waste management program and to obtain the authority needed to assume primary enforcement responsibility for that portion of the solid waste management program concerning the management of hazardous waste.

GS 130A-306. Emergency Response Fund.

There is established under the control and direction of the Department, an Emergency Response Fund which shall be a nonreverting fund consisting of any money appropriated for such purpose by the General Assembly or available to it from grants, fees, charges, and other money paid to or recovered by or on behalf of the Department pursuant to this Article, except fees specifically designated by this Article for some other use or purpose. The Emergency Response Fund shall be treated as a special trust fund and shall be credited with interest by the State Treasurer pursuant to G.S. 147-69.2 and G.S. 147-69.3. The Fund shall be used to defray expenses incurred by the Department in developing and implementing an emergency hazardous waste remedial plan and to reimburse any federal, State or local agency and any agent or contractor for expenses incurred in developing and implementing such a plan that has been approved by the Department. These funds shall be used upon a determination that sufficient funds or corrective action cannot be obtained from other sources without incurring a delay that would significantly increase the threat to life or risk or damage to the environment. This Fund may not exceed five hundred thousand dollars ($500,000); money in excess of five hundred thousand dollars ($500,000) shall be deposited in the Inactive Hazardous Sites Cleanup Fund. The Secretary is authorized to take the necessary action to recover all costs incurred by the State for site investigation and the development and implementation of an emergency hazardous waste remedial plan, including attorney's fees and other expenses of bringing the cost recovery action from the responsible party or parties. The provisions of G.S. 130A-310.7 shall apply to actions to recover costs under this section except that: (i) reimbursement shall be to the Emergency Response Fund and (ii) the State need not show that it has complied with the provisions of Part 3 of this Article.

GS 130A-307. Reserved for future codification purposes.

GS 130A-308. Continuing releases at permitted facilities.

Standards adopted under G.S. 130A-294(c) shall require, and a permit issued after November 8, 1984, shall require corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a treatment, storage, or disposal facility seeking a permit under G.S. 130A-294(c), regardless of the time at which waste was placed in such unit. Permits issued under G.S. 130A-294(c) which implement Section 3005 of RCRA (42 U.S.C. § 6925) shall contain schedules of compliance for such corrective action (where such corrective action cannot be completed prior to issuance of the permit) and assurances of financial responsibility for completing such corrective action. Notwithstanding any other provision of this section, this section shall apply only to units, facilities, and permits that are covered by Section 3004(u) of RCRA (42 U.S.C. § 6924 (u)). Notwithstanding the foregoing, corrective action authorized elsewhere in this Chapter shall not be limited by this section.

GS 130A-309. Corrective actions beyond facility boundary.

Standards adopted under G.S. 130A-294(c) shall require that corrective action be taken beyond the facility boundary where necessary to protect human health and the environment unless the owner or operator of the facility concerned demonstrates to the satisfaction of the Department that, despite the owner or operator's best efforts, the owner or operator was unable to obtain the necessary permission to undertake such action. Such standards shall take effect upon adoption and shall apply to:

(1) All facilities operating under permits issued under G.S.130A-294(c); and
(2) All disposal facilities, surface impoundments, and waste pile units (including any new units, replacements of existing units or lateral expansions of existing units) which receive hazardous waste after July 26, 1982.

Pending adoption of such rules, the Department shall issue corrective action orders for facilities referred to in (1) and (2), on a case-by-case basis, consistent with the purposes of this section. Notwithstanding any other provision of this section, this section shall apply only to units, facilities, and permits that are covered by Section 3004(v) of RCRA (42 U.S.C. § 6924(v)). Notwithstanding the foregoing, corrective action authorized elsewhere in this Chapter shall not be limited by this section.

GS 130A-309.15. Prohibited acts regarding used oil.

(a) No person may knowingly:
  (1) Collect, transport, store, recycle, use, or dispose of used oil in any manner which endangers the public health or welfare.
  (2) Discharge used oil into sewers, drainage systems, septic tanks, surface waters, groundwaters, watercourses, or marine waters.

(3) Dispose of used oil in landfills in the State unless such disposal has been approved by the Department.
(4) Mix used oil with solid waste that is to be disposed of in landfills.
(5) Mix used oil with hazardous substances that make it unsuitable for recycling or beneficial use.

(b) A person who violates subsection (a) of this section shall be guilty of a misdemeanor and upon conviction shall be punished as provided by G.S. 130A-25(a) and G.S. 14-3.

(c) A person who disposes of used oil in a landfill where such used oil has been mixed with other solid waste which may be lawfully disposed of in such landfill, and who is without knowledge that such solid waste has been mixed with used oil, is not guilty of a violation under this section.

(d) Used oil shall not be used for road oiling, dust control, weed abatement, or other similar purposes that have the potential to release used oil into the environment.

GS 130A-309.16. Public education program regarding used oil collection and recycling.

The Department shall conduct a public education program to inform the public of the needs for and benefits of collecting and recycling used oil and shall:

(1) Encourage persons who annually sell at retail, in containers for use off the premises, more than 500 gallons of oil to provide the purchasers with information on the locations of collection facilities and information on proper disposal practices.

(2) Establish, maintain, and publicize a used oil information center that disperses materials or information explaining local, State, and federal laws and rules governing used oil and informing the public of places and methods for proper disposal of used oil.

(3) Encourage the voluntary establishment of used oil collection and recycling programs and provide technical assistance to persons who organize such programs.

(4) Encourage the procurement of recycled automotive, industrial, and fuel oils and oils blended with recycled oils for all State and local government uses. Recycled oils procured under this section shall meet equipment manufacturer's specifications.

GS 130A-309.17. Registration of persons transporting, collecting, or recycling used oil; fees; reports and records.

(a) The following persons shall register annually with the Department pursuant to rules of the Department on forms prescribed by it:

(1) Any person who transports over public highways more than 500 gallons of used oil per week.
(2) Any person who maintains a collection facility that receives more than 6,000 gallons of used oil annually. For purposes of registration, the amount received does not include used oil delivered to collection centers by individuals that change their own personal motor oil.
(3) Any facility that recycles more than 10,000 gallons of used oil annually.

(b) An electric utility which generates during its operation used oil that is then reclaimed, recycled, or rerefined by the electric utility for use in its operations is not required to register or report pursuant to this section.

(c) An on-site burner which only burns a specification used oil generated by the burner is not required to register or report pursuant to this section, provided that the burning is done in compliance with any air permits issued by the Department.

(d) The Department may prescribe a fee for the registration required by this section in an amount which is sufficient to cover the cost of processing applications but which does not exceed twenty five dollars ($25.00).

(e) The Department shall require each registered person to submit, no later than 1 July of each year, a report which specifies the type and quantity of used oil transported, collected, and recycled during the preceding calendar year.

(f) Each registered person who transports or recycles used oil shall maintain records which identify:
(1) The source of the materials transported or recycled;
(2) The quantity of materials received;
(3) The date of receipt; and
(4) The destination or end use of the materials.

(g) The Department shall perform technical studies to sample used oil at facilities of representative used oil transporters and at representative recycling facilities to determine the incidence of contamination of used oil with hazardous, toxic, or other harmful substances.

(h) Any person who fails to register with the Department as required by this section shall be guilty of a misdemeanor and upon conviction shall be punished as provided by G.S. 130A-25(a) and G.S. 14-3.

(i) The proceeds from the registration fees imposed by this section shall be deposited into the Solid Waste Management Trust Fund.

GS 130A-309.18. Regulation of used oil as hazardous waste.

Nothing in this Part shall prohibit the Department from regulating used oil as a hazardous waste in a manner consistent with applicable federal law and this Article.

GS 130A-309.19. Coordination with other State agencies.

The Department of Transportation shall study the feasibility of using recycled oil products in road construction activities and shall report to the President Pro Tempore of the Senate and the Speaker of the House of Representatives annually, beginning 1 January 1991, on the results of its study.

GS 130A-309.20. Public used oil collection centers.

(a) The Department shall encourage the voluntary establishment of public used oil collection centers and recycling programs and provide technical assistance to persons who organize such programs.
(b) All State agencies and businesses that change motor oil for the public are encouraged to serve as public used oil collection centers.
(c) A public used oil collection center must:
  (1) Notify the Department annually that it is accepting used oil from the public; and
  (2) Annually report quantities of used oil collected from the public.
(d) No person may recover from the owner or operator of a used oil collection center any costs of response actions resulting from a release of either used oil or a hazardous substance against the owner or operator of a used oil collection center if such used oil is:
  (1) Not mixed with any hazardous substance by the owner or operator of the used oil collection center;
  (2) Not knowingly accepted with any hazardous substances contained therein;
  (3) Transported from the used oil collection center by a certified transporter pursuant to G.S. 130A-309.23; and
  (4) Stored in a used oil collection center that is in compliance with this section.
(e) Subsection (d) of this section applies only to that portion of the public used oil collection center used for the collection of used oil and does not apply if the owner or operator is grossly negligent in the operation of the public used oil collection center. Nothing in this section shall affect or modify in any way the obligations or liability of any person under any other provisions of State or federal law, including common law, for injury or damage resulting from a release of used oil or hazardous substances. For purposes of this section, the owner or operator of a used oil collection center may presume that a quantity of no more than five gallons of used oil accepted from any member of the public is not mixed with a hazardous substance, provided that the owner or operator acts in good faith.

GS 130A-309.21. Incentives program.

(a) The Department is authorized to establish an incentives program for individuals who change their own oil to encourage them to return their used oil to a used oil collection center.
(b) The incentives used by the Department may involve the use of discount or prize coupons, prize drawings, promotional giveaways, or other activities the Department determines will promote collection, reuse, or proper disposal of used oil.
(c) The Department may contract with a promotion company to administer the incentives program.

GS 130A-309.22. Grants to local governments.

(a) The Department shall develop a grants program for units of local government to encourage the collection, reuse, and proper disposal of used oil. No grant may be made for any project unless the project is approved by the Department.
(b) The Department shall consider for grant assistance any unit of local government project that used one or more of the following programs or any activity that the Department feels will reduce the improper disposal and reuse of used oil:
  (1) Curbside pickup of used oil containers by a unit of local government or its designee.
  (2) Retrofitting of solid waste equipment to promote curbside pickup or disposal of used oil at used oil collection centers designated by the unit of local government.

(3) Establishment of publicly operated used oil collection centers at landfills or other public places.
(4) Providing containers and other materials and supplies that the public can utilize in an environmentally sound manner to store used oil for pickup or return to a used oil collection center.
(5) Providing incentives for the establishment of privately operated public used oil collection centers.

(c) Eligible projects shall be funded according to provisions established by the Department; however, no grant may exceed twenty five thousand dollars ($25,000).

(d) The Department shall initiate rule making on or before 1 January 1991, necessary to carry out the purposes of this section.

GS 130A-309.23. Certification of used oil transporters.

(a) Any person who transports over public highways after 1 January 1992, more than 500 gallons of used oil in any week must be a certified transporter or must be employed by a person who is a certified transporter.

(b) The Department of Transportation shall develop a certification program for transporters of used oil, and shall issue, deny, or revoke certifications authorizing the holder to transport used oil. Certification requirements shall help assure that a used oil transporter is familiar with appropriate rules and used oil management procedures.

(c) The Department of Transportation shall adopt rules governing certification, which shall include requirements for the following:
(1) Registration and annual reporting pursuant to G.S. 130A-309.17.
(2) Evidence of familiarity with applicable State laws and rules governing used oil transportation.
(3) Proof of liability insurance or other means of financial responsibility for any liability which may be incurred in the transport of used oil.
(4) Marking, by the certified transporter of used oil, of all vehicles which transport used oil or all containers of used oil when it is not feasible to mark the vehicle. The mark must clearly identify the certified used oil transporter and clearly indicate that the vehicle is used to transport used oil. The marking must be visible to others travelling on the highway.

GS 130A-309.24. Permits for used oil recycling facilities.

(a) Each person who intends to operate, modify, or close a used oil recycling facility shall obtain an operation or closure permit from the Department prior to operating, modifying, or closing the facility.

(b) By 1 January 1992, the Department shall develop a permitting system for used oil recycling facilities after reviewing and considering the applicability of the permit system for hazardous waste treatment, storage, or disposal facilities.

(c) Permits shall not be required under this section for the burning of used oil as a fuel, provided:
(1) A valid air permit issued by the Department is in effect for the facility; and
(2) The facility burns used oil in accordance with applicable United States Environmental Protection Agency regulations, local government regulations, and the requirements and conditions of its air permit.

(d) No permit is required under this section for the use of used oil for the beneficiation or flotation of phosphate rock.

Part 3. Inactive Hazardous Sites

GS 130A-310. Definitions.

Unless a different meaning is required by the context, the following definitions shall apply throughout this part:

(1) "CERCLA/SARA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, P. L. 96-510, 94 Stat. 2767, 42 U.S.C. 9601 et seq., as amended, and the Superfund Amendments and Reauthorization Act of 1986, Pub. L. 99-499, 100 Stat. 1613, as amended.
(2) "Hazardous substance" means hazardous substance as defined in CERCLA/SARA.
(3) "Inactive hazardous substance or waste disposal site" or "site" means any facility, structure, or area where disposal of any hazardous substance or waste has occurred. Such sites do not include hazardous waste facilities permitted or in interim status under this Article.
(4) "Operator" means the person responsible for the overall operation of an inactive hazardous substance or waste disposal site.
(5) "Owner" means any person who owns an inactive hazardous substance or waste disposal site, or any part thereof.
(6) "Release" means release as defined in the CERCLA/SARA.
(7) "Remedy" or "Remedial Action" means remedy or remedial action as defined in CERCLA/SARA.
(8) "Remove" or "Removal" means remove or removal as defined in CERCLA/SARA.
(9) "Responsible party" means any person who is liable pursuant to G.S. 130A-310.7.

GS 130A-310.1. Identification, Inventory, and Monitoring of Inactive Hazardous Substance or Waste Disposal Sites.

(a) Within six months of the effective date of this section the Department shall develop and implement a program for locating, cataloguing, and monitoring all inactive hazardous substance or waste disposal sites in North Carolina. The Secretary shall compile and maintain an inventory of all such sites based on information submitted by owners, operators, and responsible parties, and on data obtained directly by the Secretary. The inventory shall include any evidence of contamination to the air, surface water, groundwater, surface or subsurface soils, or waste streams. The inventory shall indicate the extent of any actual damage or potential danger to public health or to the environment resulting from such contamination.
(b) Within six months of the date this section becomes effective, the Commission shall develop and make available a format and checklist for submission of data relevant to inactive hazardous substance or waste disposal sites. Within 90 days thereafter, each owner, operator, or responsible party shall submit to the Secretary all such site data as is known or readily available to him. The owner, operator, or responsible party shall certify under oath that, to the best of his knowledge and belief, such data is complete and accurate.
(c) Whenever the Secretary determines that there is a release, or substantial threat of a release, into the environment of a hazardous substance from an inactive hazardous substance or waste disposal site, the Secretary may, in addition to any other powers he may have, order any responsible party to conduct such monitoring, testing, analysis, and reporting as the Secretary deems reasonable and necessary to ascertain the nature and extent of any hazard posed by the site. Written notice of any order issued pursuant to this section shall be given to all persons subject to the order as set out in G.S. 130A-310.3(c). The Secretary, prior to the entry of any such order, shall solicit the cooperation of the responsible party.
(d) If a person fails to submit data as required in subsection (b) of this section or violates the requirements or schedules in an order issued pursuant to subsection (c) of this section, the Secretary may institute an action for injunctive relief, irrespective of all other remedies at law, in the superior court of the county where the violation occurred or where a defendant resides.
(e) Whenever a person ordered to take any action pursuant to this section is unable or fails to do so, or if the Secretary, after making a reasonable attempt, is unable to locate any responsible party, the Secretary may take such action. The cost of any action by the Secretary pursuant to this section may be paid from the Inactive Hazardous Sites Cleanup Fund, subject to a later action for reimbursement pursuant to G.S. 130A-310.7. The provisions of subdivisions (a)(1) to (a)(3) of G.S. 130A-310.6 shall apply to any action taken by the Secretary pursuant to this section.

GS 130A-310.2. Inactive Hazardous Waste Sites Priority List.

No later than six months after the date on which this section becomes effective, the Commission shall develop a system for the prioritization of inactive hazardous substance or waste disposal sites based on the extent to which such sites endanger the public health and the environment. The Secretary shall apply the prioritization system to the inventory of sites to create and maintain an Inactive Hazardous Waste Site Priority List, which shall rank all inactive hazardous substance or waste disposal sites in decreasing order of danger. This list shall identify the location of each site and the type and amount of hazardous substances or waste known or believed to be located on the site. The first such list shall be published within two years after the date that this section becomes effective, with subsequent lists to be published at intervals of not more than two years thereafter. The Secretary shall notify owners, operators, and responsible parties of sites listed on the Inactive Hazardous Waste Sites Priority List of their ranking on the list. The Inactive Hazardous Sites Priority List shall be used by the Department in determining budget requests and in allocating any State appropriation which may be made for remedial action, but shall not be used so as to impede any other action by the Department, or any remedial or other action for which funds are available.

GS 130A-310.3. Remedial Action Programs for Inactive Hazardous Substance or Waste Disposal Sites.

(a) The Secretary may issue a written declaration, based upon findings of fact, that an inactive hazardous substance or waste disposal site endangers the public health or the environment. After issuing such a declaration, and at any time during which the declaration is in effect, the Secretary shall be responsible for:
  (1) Monitoring the inactive hazardous substance or waste disposal site;
  (2) Developing a plan for public notice and for community and local government participation in any inactive hazardous substance or waste disposal site remedial action program to be undertaken;
  (3) Approving an inactive hazardous substance or waste disposal site remedial action program for the site;
  (4) Coordinating the inactive hazardous substance or waste disposal site remedial action program for the site; and
  (5) Ensuring that the hazardous substance or waste disposal site remedial action program is completed.

(b) Where possible, the Secretary shall work cooperatively with any owner, operator, responsible party, or any appropriate agency of the State or federal government to develop and implement the inactive hazardous substance or waste disposal site remedial action program. The Secretary shall not take action under this section to the extent that the Environmental Management Commission, the Commissioner of Agriculture, or the Pesticide Board has assumed jurisdiction pursuant to Articles 21 or 21A of Chapter 143 of the General Statutes.

(c) Whenever the Secretary has issued such a declaration, and at any time during which the declaration is in effect, the Secretary may, in addition to any other powers he may have, order any responsible party:
  (1) To develop an inactive hazardous substance or waste disposal site remedial action program for the site subject to approval by the Department; and
  (2) To implement the the program within reasonable time limits specified in the order.
  Written notice of such an order shall be provided to all persons subject to the order personally or by certified mail. If given by certified mail, notice shall be deemed to have been given on the date appearing in the return of the receipt. If giving of notice cannot be accomplished either personally or by certified mail, notice shall be given as provided in G.S. 1A-1, Rule 4(j).

(d) In any inactive hazardous substance or waste disposal site remedial action program implemented hereunder, the Secretary shall ascertain the most nearly applicable cleanup standard as would be applied under CERCLA/SARA, and may seek federal approval of any such program to insure concurrent compliance with federal standards. State standards may exceed and be more comprehensive than such federal standards. The Secretary shall assure concurrent compliance with applicable standards set by the Environmental Management Commission.

(e) For any removal or remedial action conducted entirely on-site under this Part, to the extent that a permit would not be required under 42 U.S.C § 9621(e) for a removal or remedial action conducted entirely on-site under CERCLA/SARA, the Secretary may grant a waiver from any State law or rule that requires that an environmental permit be obtained from the Department. The Secretary shall not waive any requirement that a permit be obtained unless the owner, operator, or other responsible party has entered into an agreement with the Secretary to implement a voluntary remedial action plan under G.S. 130A-310.9(b). Prior to granting a permit waiver, the Secretary shall invite public participation in the development of the remedial action plan in the manner set out in G.S. 130A-310.4.

GS 130A-310.4. Public Participation in the Development of the Remedial Action Plan.

(a) Within 10 days after the Secretary issues a declaration pursuant to G.S. 130A-310.3, he shall notify in writing the local board of health and the local health director having jurisdiction in the county or counties in which an inactive hazardous substance or waste disposal site is located that the site may endanger the public health or environment and that a remedial action plan is being developed. The Secretary shall involve the local health director in the development of the remedial action plan.

(b) Before approving any remedial action plan, the Secretary shall make copies of the proposed plan available for inspection as follows:

(1) A copy of the plan shall be provided to the local health director;
(2) A copy of the proposed plan shall be filed with the register of deeds in the county or counties in which the site is located;
(3) A copy of the plan shall be provided to each public library located in the county or counties in which the site is located;
(4) The Secretary may place copies of the plan in other locations so as to assure the availability thereof to the public.

In addition, copies of the plan shall be available for inspection and copying at cost by the public during regular business hours in the offices of the agency within the Department with responsibility for the administration of the remedial action program.

(c) Before approving any remedial action plan, the Secretary shall give notice of the proposed plan as follows:

(1) A notice and summary of the proposed plan shall be published weekly for a period of three consecutive weeks in a newspaper having general circulation in the county or counties where the site is located;
(2) Notice that a proposed remedial action plan has been developed shall be given by first class mail to persons who have requested such notice. Such notice shall state the locations where a copy of the remedial action plan is available for inspection. The Department shall maintain a mailing list of persons who request notice pursuant to this section.

(d) The Secretary may conduct a public meeting to explain the proposed plan and alternatives to the public.

(e) At least 45 days from the latest date on which notice is provided pursuant to subsection (c) of this section shall be allowed for the receipt of written comment on the proposed remedial action plan prior to its approval. If a public hearing is held pursuant to subsection (f) of this section, at least 20 days will be allowed for receipt of written comment following the hearing prior to the approval of the remedial action plan.

(f) If the Secretary determines that significant public interest exists, he shall conduct a public hearing on the proposed plan and alternatives. The Department shall give notice of the hearing at least 30 days prior to the date thereof by:

(1) Publication as provided in subdivision (c)(1) of this section, with first publication to occur not less than 30 days prior to the scheduled date of the hearing; and
(2) First class mail to persons who have requested notice as provided in subdivision (c)(2) of this section.

(g) The Commission on Health Services shall adopt rules prescribing the form and content of the notices required by this section. The proposed remedial action plan shall include a summary of all alternatives considered in the development of the plan. A record shall be maintained of all comment received by the Department regarding the remedial action plan.

GS 130A-310.5. Authority of the Secretary with Respect to Sites which Pose an Imminent Hazard.

(a) An imminent hazard exists whenever the Secretary determines that there exists a condition caused by an inactive hazardous substance or waste disposal site, including a release or a substantial threat of a release into the environment of a hazardous substance from the site, which is causing serious harm to the public health or environment, or which is likely to cause such harm before a remedial action plan can be developed. Whenever the Secretary determines that an imminent hazard exists, he may, in addition to any other powers he may have, without notice or hearing, order any known responsible party to take immediately any action necessary to eliminate or correct the condition; or the Secretary, in his discretion, may take such action without issuing an order.

Written notice of any order issued pursuant to this section shall be provided to all persons subject to the order as set out in G.S. 130A-310.3(c). Unless the time required to do so would increase the harm to the public health or the environment, the Secretary shall solicit the cooperation of responsible parties prior to the entry of any such order. The provisions of subdivisions (1) to (3) of G.S. 130A-310.6(a) shall apply to any action taken by the Secretary pursuant to this section, and any such action shall be considered part of a remedial action program the cost of which may be recovered from any responsible party.

(b) If a person violates the requirements or schedules in an order issued pursuant to this section, the Secretary may institute an action for injunctive relief, irrespective of all other remedies at law, in the superior court of the county where the violation occurred or where a defendant resides.

(c) The cost of any action by the Secretary pursuant to this section may be paid from the Inactive Hazardous Sites Cleanup Fund or the Emergency Response Fund established pursuant to G.S. 130A-306, subject to a later action for reimbursement pursuant to G.S. 130A-310.7.

GS 130A-310.6. State Action Upon Default of Responsible Parties or When No Responsible Party Can be Located.

(a) Whenever a person ordered to develop and implement an inactive hazardous substance or waste disposal site remedial action program is unable or fails to do so within the time specified in the order, the Secretary may develop and implement or cause to be developed and implemented such a program. The cost of developing and implementing a remedial action program pursuant to this section may be paid from the Inactive Hazardous Sites Cleanup Fund, subject to a later action for reimbursement pursuant to G.S. 130A-310.7.

(1) The Department is authorized and empowered to use any staff, equipment or materials under its control or provided by other cooperating federal, State or local agencies and to contract with any agent or contractor it deems appropriate to develop and implement the remedial action program. State agencies shall provide to the maximum extent feasible such staff, equipment, and material as may be available for developing and implementing a remedial action program.

(2) Upon completion of any inactive hazardous substance or waste disposal remedial action program, any State or local agency that has provided personnel, equipment, or material shall deliver to the Department a record of expenses incurred by the agency. The amount of the incurred expenses shall be disbursed by the Secretary to each such agency. The Secretary shall keep a record of all expenses incurred for the services of State personnel and for the use of the State's equipment and material.

(3) As soon as feasible or after completion of any inactive hazardous substance or waste disposal site remedial action program, the Secretary shall prepare a statement of all expenses and costs of the program expended by the State and issue an order demanding payment from responsible parties. Written notice of such an order shall be provided to all persons subject to the order personally or by certified mail. If given by certified mail, notice shall be deemed to have been given on the date appearing on the return of the receipt. If giving of notice cannot be accomplished either personally or by certified mail, notice shall then be given as provided in G.S. 1A-1, Rule 4(j).

(b) If the Secretary, after declaring that an inactive hazardous substance or waste disposal site may endanger the public health or the environment, is unable, after making a reasonable attempt, to locate any responsible party, the Department may develop and implement a remedial action program for the site as provided in subsection (a)(1) and (2) of this section. If responsible parties are subsequently located, the Secretary may issue an order demanding payment from such persons in the manner set forth in subdivision (a)(3) of this section for the necessary expenses incurred by the Department for developing and implementing the remedial action program. If the persons subject to such an order refuse to pay the sum expended, or fail to pay such sum within the time specified in the order, the Secretary shall bring an action in the manner set forth in G.S. 130A-310.7.

GS 130A-310.7. Action for Reimbursement; Liability of Responsible Parties.

(a) Notwithstanding any other provision or rule of law, and subject only to the defenses set forth in this subsection, any person who:
  (1) Discharges or deposits; or
  (2) Contracts or arranges for any discharge or deposit; or
  (3) Accepts for discharge or deposit; or
  (4) Transports or arranges for transport for the purpose of discharge or deposit

any hazardous substance, the result of which discharge or deposit is the existence of an inactive hazardous substance or waste disposal site, shall be considered a responsible party. Neither an innocent landowner who is a bona fide purchaser of the inactive hazardous substance or waste disposal site without knowledge or without a reasonable basis for knowing that hazardous substance or waste disposal had occurred nor a person whose interest or ownership in the inactive hazardous substance or waste disposal site is based on or derived from a security interest in the property shall be considered a responsible party. A responsible party shall be directly liable to the State for any or all of the reasonably necessary expenses of developing and implementing a remedial action program for such site. The Secretary shall bring an action for reimbursement of the Inactive Hazardous Sites Cleanup Fund in the name of the State in the superior court of the county in which the site is located to recover such sum and the cost of bringing the action. The State must show that a danger to the public health or the environment existed and that the State complied with the provisions of this Part.

(b) There shall be no liability under this section for a person who can establish by a preponderance of the evidence that the danger to the public health or the environment caused by the site was caused solely by:
  (1) An act of God; or
  (2) An act of war; or
  (3) An intentional act or omission of a third party (but this defense shall not be available if the act or omission is that of an employee or agent of the defendant, or if the act or omission occurs in connection with a contractual relationship with the defendant); or
  (4) Any combination of the above causes.

GS 130A-310.8. Recordation of Inactive Hazardous Substance or Waste Disposal Sites.

(a) After determination by the Department of the existence and location of an inactive hazardous substance or waste disposal site, the owner of the real property on which the site is located, within 180 days after official notice to him to do so, shall submit to the Department a survey plat of areas designated by the Department which has been prepared and certified by a professional land surveyor, and entitled "NOTICE OF INACTIVE HAZARDOUS SUBSTANCE OR WASTE DISPOSAL SITE." The notice shall include a legal description of the site that would be sufficient as a description in an instrument of conveyance, shall meet the requirements of G.S. 47-30 for maps and plats, and shall identify:
  (1) the location and dimensions of the disposal areas with respect to permanently surveyed benchmarks; and
  (2) the type, location, and quantity of hazardous substances disposed of on the site, to the best of the owner's knowledge.

Where an Inactive Hazardous Substance of Waste Disposal Site is located on more than one parcel or tract of land, a composite map or plat showing all such sites may be recorded.

(b) After the Department approves and certifies the Notice, the owner of the site shall file the certified copy of the notice in the register of deeds' office in the county or counties in which the land is located.

(c) The register of deeds shall record the certified copy of the notice and index it in the grantor index under the names of the owners of the lands.

(d) In the event that the owner of the site fails to submit and file the notice required by this section within the time specified, the Secretary may prepare and file such notice. The costs thereof may be recovered by the Secretary from any responsible party. In the event that an owner of a site who is not a responsible party submits and files the notice required by this section, he may recover the reasonable costs thereof from any responsible party.

(e) When an inactive hazardous substance or waste disposal site is sold, leased, conveyed, or transferred, the deed or other instrument of transfer shall contain in the description section, in no smaller type than that used in the body of the deed or instrument, a statement that the property has been used as a hazardous substance or waste disposal site and a reference by book and page to the recordation of the notice.

(f) A Notice of Inactive Hazardous Substance or Waste Disposal Site shall be cancelled by the Secretary after the hazards have been eliminated. The Secretary shall send to the register of deeds of the county where the Notice is recorded a statement that the hazards have been eliminated and request that the notice be cancelled of record. The Secretary's statement shall contain the names of the landowners as shown in the notice and reference the plat book and page where the notice is recorded. The register of deeds shall record the Secretary's statement in the deed books and index it on the grantor index in the name of the landowner as shown in the notice and on the grantee index in the name "Secretary of Department of Environment, Health, and Natural Resources". The register of deeds shall make a marginal entry on the notice showing the date of cancellation and the book and page where the Secretary's statement is recorded, and the register shall sign the entry. If a marginal entry is impracticable because of the method used to record maps and plats, the register of deeds shall not be required to make a marginal entry.

(g) This section shall apply with respect to any facility, structure, or area where disposal of any hazardous substance or waste has occurred which is undergoing voluntary remedial action pursuant to this Part.

GS 130A-310.9. Voluntary remedial actions; maximum financial responsibility; agreements; implementation and oversight by private engineering and consulting firms.

(a) No one owner, operator, or other responsible party who voluntarily participates in the implementation of a remedial action program under G.S. 130A-310.3 or G.S. 130A-310.5 may be required to pay in excess of three million dollars ($3,000,000) for the cost of implementing a remedial action program at a single inactive hazardous substance or waste disposal site. The limitation of liability contained in this section applies only to the cost of implementation of the program and does not apply to the cost of the development of the remedial action plan.

(b) The Secretary may enter into an agreement with an owner, operator, or other responsible party which provides for implementation of a voluntary remedial action program in accordance with a remedial action plan approved by the Department. Investigations, evaluations, and voluntary remedial actions are subject to the provisions of G.S. 130A-310.1(c), 130A-310.1(d), 130A-310.3(d), 130A-310.5, 130A-310.8, and any other requirement imposed by the Department. A voluntary remedial action and all documents that relate to the voluntary remedial action shall be fully subject to inspection and audit by the Department. At least 30 days prior to entering into any agreement providing for the implementation of a voluntary remedial action program, the Secretary shall mail notice of the proposed agreement as provided in G.S. 130A-310.4(c)(2). Sites undergoing voluntary remedial actions shall be so identified as a separate category in the inventory of sites maintained pursuant to G.S. 130A-310.1 but shall not be included on the Inactive Hazardous Waste Sites Priority List required by G.S. 130A-310.2

(c) The Department may approve a private environmental consulting and engineering firm to implement and oversee a voluntary remedial action by an owner, operator, or other responsible party. An owner, operator, or other responsible party who enters into an agreement with the Secretary to implement a voluntary remedial action may hire a private environmental consulting or engineering firm approved by the Department to implement and oversee the voluntary remedial action. A voluntary remedial action that is implemented and overseen by a private environmental consulting or engineering firm shall be implemented in accordance with all federal and State laws, regulations, and rules that apply to remedial actions generally and is subject to rules adopted pursuant to G.S. 130A-310.12(b). The Department may revoke its approval of the oversight of a voluntary remedial action by a private environmental consulting or engineering firm and assume direct oversight of the voluntary remedial action whenever it appears to the Department that the voluntary remedial action is not being properly implemented or is not being adequately overseen. The Department may require the owner, operator, other responsible party, or private environmental consulting or engineering firm to take any action necessary to bring the voluntary remedial action into compliance with applicable requirements.

GS 130A-310.10. Annual Reports.

(a) The Secretary shall present an annual report to the General Assembly and the Environmental Review Commission which shall include at least the following:
  (1) The Inactive Hazardous Waste Sites Priority List;
  (2) A list of remedial action plans requiring State funding through the Inactive Hazardous Sites Cleanup Fund;
  (3) A comprehensive budget to implement these remedial action plans and the adequacy of the Inactive Hazardous Sites Cleanup Fund to fund the cost of said plans;
  (4) A prioritized list of sites that are eligible for remedial action under CERCLA/SARA together with recommended remedial action plans and a comprehensive budget to implement such plans. The budget for implementing a remedial action plan under CERCLA/SARA shall include a statement as to any appropriation that may be necessary to pay the State's share of such plan;
  (5) A list of sites and remedial action plans undergoing voluntary cleanup with Departmental approval;

(6) A list of sites and remedial action plans that may require State funding, a comprehensive budget if implementation of these possible remedial action plans is required, and the adequacy of the Inactive Hazardous Sites Cleanup Fund to fund the possible costs of said plans;
(7) A list of sites which pose an imminent hazard;
(8) A comprehensive budget to develop and implement remedial action plans for sites that pose imminent hazards and that may require State funding, and the adequacy of the Inactive Hazardous Sites Cleanup Fund; and
(9) Any other information requested by the General Assembly or the Environmental Review Commission.

(b) The annual reports required by this section shall be made by the Secretary on 15 February of each year beginning 15 February 1990.

GS 130A-310.11. Inactive Hazardous Sites Cleanup Fund Created.

There is established under the control and direction of the Department the Inactive Hazardous Sites Cleanup Fund. This fund shall be a revolving fund consisting of any monies appropriated for such purpose by the General Assembly or available to it from grants, fees, and other monies paid to it or recovered by or on behalf of the Department. The Inactive Hazardous Sites Cleanup Fund shall be treated as a nonreverting special trust fund and shall be credited with interest by the State Treasurer pursuant to G.S. 147-69.2 and G.S. 147-69.3.

[Session Laws 1989, c. 286, s. 12, provides: "The Governor's Waste Management Board shall study funding mechanisms for the Inactive Hazardous Sites Program. As a part of its study, the Board shall consider funding mechanisms used for similar programs in other states. The Board shall report its findings and recommendations to the General Assembly and the Environment Review Commission on or before 1 March 1990. Notwithstanding any rule or resolution to the contrary, proposed legislation to implement any recommendation of the Board or of the Environmental Review Commission regarding the Inactive Hazardous Sites Program may be introduced and considered during the 1990 Regular Session of the General Assembly."]

GS 130A-310.12. Administrative Procedure; adoption of rules.

(a) The provisions of Chapter 150B of the General Statutes apply to this Part. The Commission shall adopt rules for the implementation of this Part.
(b) The Commission shall adopt rules governing the selection and use of private environmental consulting and engineering firms to implement and oversee voluntary remedial actions by owners, operators, or other responsible parties under G.S. 130A-310.9(c). Rules adopted under this subsection shall specify:
(1) Standards applicable to private environmental consulting and engineering firms.
(2) Criteria and procedures for approval of firms by the Department.
(3) Requirements and procedures under which the Department monitors and audits a voluntary remedial action to ensure that the voluntary remedial action complies with applicable federal and State law, regulations, and under which the owner, operator, or other responsible party reimburses the Department for the cost of monitoring and auditing the voluntary remedial action.
(4) Any financial assurances that may be required of an owner, operator, or other responsible party.
(5) Requirements for the preparation maintenance and public availability of work plans and records, reports of data collection including sampling, sample analysis, and other site testing, and other records and reports that are consistent with the requirements applicable to remedial actions generally.

Part 4. Superfund Program.

GS 130A-310.20. Definitions

Unless a different meaning is required by the context, the following definitions shall apply throughout this Part:

(1) "CERCLA/SARA" or "Superfund" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 2767, 42 U.S.C. § 9601 **et seq.**, as amended, and the Superfund Amendments and Reauthorization Act of 1986, Pub. L. No. 99-499, 100 Stat. 1613, as amended.

GS 130A-310.21. Administration of the Superfund Program.

The Department shall maintain an appropriate administrative subunit within the solid waste management unit authorized by G.S. 130A-291 to carry out those activities in which the State is authorized to engage under CERCLA/SARA.

GS 130A-310.22. Contracts Authorized.

(a) The Department is authorized to enter into contracts and cooperative agreements with the United States and to engage in any activity otherwise authorized by law to identify, investigate, evaluate, and clean up any site or facility covered by CERCLA/SARA including but not limited to performing preliminary assessments, site investigations, remedial investigations, and feasibility studies; preparation of records of decision; conducting emergency response, remedial, and removal actions; and engaging in enforcement activities in accordance with the provisions of CERCLA/SARA.

(b) The Department may make all assurances required by federal law or regulation including but not limited to assuring that the State will assume responsibility for the operation and maintenance of any remedial action for the anticipated duration of the remedial action; assuring that the State will provide its share of the cost of any remedial action at a site or facility which was privately owned or operated; assuring that the State will provide its share of the cost of any removal, remedial planning, and remedial action at a site or facility owned or operated by the State or a political subdivision of the State; assuring the availability of off-site treatment, storage, or disposal capacity needed to effectuate a remedial action; assuring that the State will take title to, acquire an interest in, or accept transfer of any interest in real property needed to effectuate a remedial action; assuring that the State has adequate capacity to meet the assurances required by CERCLA/SARA (42 U.S.C. § 9604(c)(9)); assuring access to the facility and any adjacent property including the securing of any right-of-way or easement needed to effectuate a remedial action; and assuring that the State will satisfy all federal, State, and local requirements for permits and approvals necessary to effectuate a remedial action.

(c) Each contract entered into by the Department under this section shall stipulate that all obligations of the State are subject to the availability of funds. Neither this section nor any contract entered into under authority of this section shall be construed to obligate the General Assembly to make any appropriation to implement this Part or any contract entered into under this section. The Department shall implement this Part and any contract entered into under this section from funds otherwise available or appropriated to the Department for such purpose.

PART III

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SECTION .0700 - CIVIL PENALTY PROCEDURES

(c) In addition to any assessment that might be appropriate, the Division may suspend or revoke the permit of any facility in accordance with G.S. 130A-23.
(d) The Division or its delegates may modify a penalty upon finding that additional or different facts should have been considered in determining the amount of the assessment or upon finding that the respondent has corrected or mitigated the harm caused by the violation.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. April 1, 1982;
Amended Eff. May 1, 1987.

.0704 PAYMENTS: HEARING

(a) Within 60 days after receipt of notification of a penalty assessment, payment must be tendered unless a written request for an administrative hearing has been filed pursuant to G.S. 130A-22. All written requests for a hearing shall be made in accordance with G.S. 150B.
(b) Payment may be tendered in conjunction with a hearing request and in such case, the payment will be accepted as conditional upon final action.
(c) This Rule shall not preclude informal conferences concerning the penalty assessed.
(d) The Division will acknowledge the receipt of all payments.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. April 1, 1982;
Amended Eff. September 1, 1990; February 1, 1988; May 1, 1987.

.0705 STAY OF PENALTY ASSESSMENT

When an administrative hearing is requested for a purpose other than remission or reduction of the penalty assessed, the penalty will be stayed as of the date of receipt of the request by the Office of Administrative Hearings until service of the final decision or other settlement of the matter.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. April 1, 1982;
Amended Eff. May 1, 1987.

.0706 WAIVER OF ADMINISTRATIVE HEARING

A respondent waives his right to a hearing when he:
(1) submits a written waiver to the Division or its delegates of his right to an administrative hearing;
(2) fails to request a hearing within 30 days of receipt of notice of penalty assessment; or
(3) fails to attend a scheduled administrative hearing.

History Note: Statutory Authority G.S. 130A-22(f);
Eff. April 1, 1982;
Amended Eff. May 1, 1987.

.0707 REFERRAL - Repealed:

History Note: Statutory Authority G.S. 130A-22(f);
Eff. April 1, 1982;
Amended Eff. May 1, 1987;
Repealed Eff. September 1, 1990.