STATE OF VERMONT
AGENCY OF NATURAL RESOURCES

HAZARDOUS WASTE MANAGEMENT REGULATIONS

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Subchapter 1: GENERAL PROVISIONS

7-101 AUTHORITY

These regulations are promulgated by the Secretary of the Vermont Agency of Natural Resources pursuant to the authority granted by 10 V.S.A. Chapter 159.

7-102 PURPOSE

These regulations are intended to protect public health and the environment by comprehensively regulating the generation, storage, collection, transport, treatment, disposal, use, reuse, and recycling of hazardous waste in Vermont.

7-103 DEFINITIONS

As used in this chapter, all terms not defined herein shall have the meaning given them in 40 CFR Parts 260 through 270.

"Board" means the solid waste and air quality variance board established by Section 553 of title 10 V. S. A.

"Boiler" means an enclosed device using controlled flame combustion and either:

(a) Having the following characteristics:

(1) Having physical provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases; and

(2) Being of integral design, in that the combustion chamber and the primary energy recovery section(s) (such as waterwalls and superheaters) are physically formed into one manufactured or assembled unit, except that process heaters (units that transfer energy directly to a process stream) and fluidized bed combustion units are not precluded from being boilers solely because they are not of integral design. 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 of integral design; however, a unit may be of integral design even though secondary energy recovery equipment (such as economizers or air preheaters) is not physically formed into the same unit as the combustion chamber and the primary energy recovery section; and

(3) Maintaining while in operation 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

(4) Exporting and utilizing at least 75 percent of the recovered energy, calculated on an annual basis, not including recovered heat used

internally in the same unit, such as the preheating of fuel or combustion air, the driving of induced or forced draft fans or feed-water pumps; or

(b) The device is one which the Secretary has determined, on a case-by-case basis, to be a boiler, after considering the standards in 40 CFR Section 260.32.

"Certificate of Need" means a certificate issued by the secretary under 10 V.S.A. 6606a that must be obtained before a person may begin site preparation for or construction of a hazardous waste management facility.

"Certified Hazardous Waste Facility" means a treatment, storage, or disposal facility which is authorized to operate under a federally approved state hazardous waste program, the federal hazardous waste program, or a foreign government.

"Completed Copy" means any copy of the manifest which has been signed by the generator, designated transporter, any continuing transporters, and the designated certified hazardous waste treatment, storage, or disposal facility.

"Consignee" means the ultimate treatment, storage or disposal facility in a receiving country to which the hazardous waste will be sent.

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

"Control" over a waste means the possession, ownership or physical control of such waste, including but not limited to the following activities: (a) generation; (b) treatment; (c) storage; (d) transportation; or (e) disposal, whether or not such activity is authorized by law.

"Designated Facility" means a certified hazardous waste treatment, storage or disposal facility or a facility that is regulated under Section 7-601(2)(c) or Section 7-613 that has been designated on the manifest pursuant to Subchapter 7.

"Discarded." A material is discarded if it is:

(a) Abandoned;

(b) Disposed of;

(c) Recycled, until the recycling process has been completed;

(d) Burned or incinerated;

(e) Accumulated, stored, or treated in lieu of or before being discarded; or

(f) Applied to or placed on the land in a manner that constitutes disposal or 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.

"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" means the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any ground or surface waters.

"Economic poison" means

(a) Any substance produced, distributed or used as a plant regulator, defoliant, or desiccant;

(b) Any substance produced, distributed or used for preventing, destroying, or repelling any insects, rodents, nematodes, fungi, weeds, or other forms of plant or animal life or viruses, except viruses on or in living man or other animals, which the Commissioner of Agriculture shall declare to be a pest.

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

"EPA Acknowledgement 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.

"Facility" means all contiguous land, structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of waste. A facility may consist of several treatment, storage, or disposal operational units.

"Generator" means a generator as defined in Section 7-302.

"Hazardous material" means all petroleum and toxic, corrosive or other chemicals and related sludge included in any of the following:

(1) Any substance defined in Section 101(14) of the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980;

(2) Petroleum, including crude oil or any fraction thereof; or

(3) Hazardous waste, as determined under subsection (18) of this section.

"Hazardous material" does not include herbicides and pesticides when applied consistent with good practice conducted in conformity with federal, state and local laws and regulations and according to manufacturers' instructions. Nothing in this subdivision shall affect the authority granted and the limitations imposed by 10 V. S. A. Section 6608a.

"Hazardous Waste" means any waste or combination of wastes of a solid, liquid, contained gaseous, or semi-solid form, including but not limited to those which are toxic, corrosive, ignitable, reactive, strong sensitizers, or which generate pressure through decomposition, heat or other means, which in the judgment of the Secretary may cause, or contribute to, an increase in mortality or an increase in serious irreversible or incapacitating reversible illness, taking into account the toxicity of such waste, its persistence and degradability in nature, and its potential for assimilation, or concentration in tissue, and other factors that may otherwise cause or contribute to adverse acute or chronic effects on the health of persons or other living organisms, or any matter which may have an unusually destructive effect on water quality if discharged to ground or surface waters of the state. All special nuclear, source, or by-product material, as defined by the Atomic Energy Act of 1954 and amendments thereto, codified in 42 U. S. C. Section 2014, is specifically excluded from this definition.

"Hazardous waste management" means the systematic and comprehensive management of the generation, storage, transport, treatment, including recycling and recovery, or disposal of hazardous waste materials.

"Hazardous waste management plan" means the plan adopted by the secretary under 10 V.S.A. 6604(a).

"Household Refuse" means any garbage, trash or rubbish derived from households including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds and day use recreation areas.

"Household Sewage" means untreated sanitary wastes from a household which pass through a sewage system to a sewage treatment plant.

"Identification Number" means the number assigned by the Secretary to each generator, transporter and treatment, storage, or disposal facility.

"Incinerator" means any enclosed device using controlled flame combustion that neither meets the criteria for classification as a boiler nor is listed as an industrial furnace.

"Incompatible Waste" means a hazardous waste which is unsuitable for:

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

(b) 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 (examples in Appendix VII).

"Industrial Furnace" means any of the following enclosed devices that are integral components of manufacturing processes and that use controlled flame devices to accomplish recovery of materials or energy:

(a) Cement kilns;

(b) Lime kilns;

(c) Aggregate kilns;

(d) Phosphate kilns;

(e) Coke ovens;

(f) Blast furnaces;

(g) Smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, reverberator furnaces, sintering machine, roasters, and foundry furnaces);

(h) Titanium dioxide chloride process oxidation reactors;

(i) Methane reforming furnaces;

(j) Pulping liquor recovery furnaces;

(k) Combustion devices used in the recovery of sulfur values from spent sulfuric acid; or

(l) Such other devices as the Secretary may, by rule, add to this list on the basis of one or more of the following factors:

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

(2) The use of the device to burn or reduce raw materials to make a

material product;

(3) 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;

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

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

(6) Other factors as appropriate.

"Infectious Waste" means a waste capable of producing an infectious disease. For a waste to be infectious, it must contain pathogens with sufficient virulence and quantity so that exposure to the waste by a susceptible host could result in an infectious disease. The following types of wastes shall be managed as infectious wastes when the presence of an infectious disease is known or when exposure to or contamination by pathogens is known to have occurred:

(a) Isolation wastes;

(b) Cultures and stocks of etiologic agents;

(c) Blood and blood products;

(d) Pathological wastes;

(e) Contaminated laboratory wastes;

(f) Sharps;

(g) Dialysis unit wastes;

(h) Experimental animal carcasses and body parts;

(i) Experimental animal bedding and other animal room wastes;

(j) Contaminated food and other products; and

(k) Contaminated equipment.

"Land Disposal" means placement in or on the land 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, concrete vault or bunker intended for disposal purposes.

"Manifest" means the form adopted by the Secretary and used for identifying the generator, transporter, quantity, composition, origin, and destination of hazardous waste during its transportation from the site of generation to the point of treatment, storage, or disposal.

"Manufacturing or Mining By-Product" is a material that is not one of the primary products of a particular manufacturing or mining operation, is a secondary and incidental product of the particular operation and would not be solely and separately manufactured or mined by the particular manufacturing or mining operation. The term does not include an intermediate manufacturing or mining product which results from one of the steps in a manufacturing or mining process and is typically processed through the next step of the process within a short time.

"Notice of Intent" means the notice required under 10 V.S.A 6606a(b)(2).

"Obsolete Pesticide Products" means concentrated pesticide products which are unusable due to damage to containers or the pesticide formulation; in damaged containers; pesticide products whose U. S. EPA registration number has been cancelled or suspended leaving no valid registered uses on the label; or unwanted registered pesticide compounds which the generator wishes to dispose of.

"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 cross-roads 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 that person controls and to which the public does not have access, is also considered on-site property.

"Person" means any individual, partnership, company, corporation, association, unincorporated association, joint venture, trust, municipality, the State of Vermont or any agency, department, or subdivision of the state, federal agency, or any other legal or commercial entity.

"Pesticidal Wastes" means unwanted pesticide dilutions, rinses, and containers.

"Primary Exporter" means any person who is required to originate the manifest for a shipment of hazardous waste in accordance with Subchapter 7 when the manifest 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 any foreign country to which hazardous waste is sent for the purpose of treatment, storage, or disposal (except short-term storage incidental to

transportation).

"Release" means any intentional or unintentional action or omission resulting in the spilling, leaking, pumping, pouring, emitting, emptying, dumping, or disposing of hazardous materials into the surface or groundwaters, or onto the lands in the state, or into waters outside the jurisdiction of the state when damage may result to the public health, lands, waters or natural resources within the jurisdiction of the state.

"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.

"Secretary" means the Secretary of the Agency of Natural Resources or his or her duly authorized representative. In order to implement the provisions of 10 V. S. A. Sections 6608a and 6608b relating to economic poisons and low level radioactive wastes, the term Secretary includes the Commissioner of Agriculture and the Commissioner of Health.

"Sludge" means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.

"Small Quantity Generator" means a small quantity generator as defined in Section 7-303.

"Solid Waste" means any discarded garbage, refuse, septage, sludge from a waste treatment plant, water supply plant, or pollution control facility and other discarded material including solid, liquid, semi-solid, or contained gaseous materials resulting from industrial, commercial, mining, or agricultural operations and from community activities but does not include animal manure and absorbent bedding used for soil enrichment or solid or dissolved materials in industrial discharges which are point sources subject to permits under the Water Pollution Control Act, Chapter 47 of this title.

"Storage" means the actual or intended containment of wastes, either on a temporary basis or for a period of years; in such a manner as not to constitute disposal of such wastes.

"Storage Above Ground" means the containment of hazardous waste in a discrete vessel on or above ground level, excluding surface impoundments.

"Surface Impoundment" means a natural topographic depression, artificial excavation, or dike arrangement, including a pit, pond, or lagoon, whether or not it has a permeable bottom or sides allowing seepage of its contents, which is:

(a) Used primarily for the storage, treatment, or disposal of hazardous waste in liquid, semi-solid, or solid form; and

(b) Constructed on, below, or partially in the ground.

"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.

"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.

"Transit Country" means any foreign country, other than a receiving country, through which a hazardous waste is transported.

"Transport or Transportation" means the movement of wastes 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 or solid waste, so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste safer for transport, amenable for recovery, amenable for storage, or reduced in volume, or for hazardous wastes, so as to render such waste non-hazardous.

"Waste" means a material that is discarded or is being accumulated, stored, or physically, chemically or biologically treated prior to being discarded or has served its original intended use and is normally discarded or is a manufacturing or mining by-product and is normally discarded.

"Waste facility panel" means the panel created under 10 V.S.A 6101(a).

"Waste oil" means any oil that has been refined from crude oil, used, and, as a result of such use, is contaminated by physical or chemical impurities. For the purposes of these regulations, this definition of waste oil does not include petroleum naphtha solvents.

7-104 NOTIFICATION REQUIREMENTS

(1) Any person who generates or transports hazardous waste or who owns or operates a facility for the treatment, storage, use, disposal, or recycling of hazardous waste shall notify the Secretary of such activity. The notification shall be made on the Notification of Hazardous Waste Activity form provided by the Secretary and shall include the following information:

(a) The name and mailing address of the generator, transporter or facility;

(b) The address of the site for which notification is being given;

(c) The EPA identification number of the generator, transporter, user, or facility if one has been assigned;

(d) The name and telephone number of the individual who should be contacted regarding information contained in the notification;

(e) The type of hazardous waste activity for which notification is being given;

(f) A description of the waste handled and treated, stored or disposed; and

(g) The monthly volume and weight of such waste handled, determined from actual waste handling records, or, if a new or proposed activity, from an estimation.

(2) Any person who markets, burns or transports waste oil fuel or hazardous waste fuel must notify the Secretary in accordance with this section.

(3) Notification is required upon transferral of ownership of an entity that was required to notify the Secretary under subsections (1) and (2) above.

(4) A generator, transporter, or treatment, storage, or disposal facility shall maintain an up-to-date notification filed with the Secretary which accurately describes current waste activity and waste generation.

7-105 EMERGENCY ACTIONS

(1) In the event of a discharge of hazardous waste, the person in control of such waste shall:

(a) Take all appropriate immediate actions to protect human health and the environment including, but not limited to, emergency containment measures and notification as described below; and

(b) Take any further clean up actions as may be required and approved by federal, state, or local officials so that the discharge and related contaminated materials no longer present a hazard to human health or the environment.

(2) All hazardous waste discharges shall be immediately reported to the Secretary by the person or persons exercising control over such waste by calling either (802) 241-3888 or (800) 641-5005 followed by a written report within ten (10) days thereafter.

(3) If the discharge occurred during transportation, the transporter shall, in addition

to notifying the Secretary:

(a) Notify the National Response Center at 800-424-8802 or 202-426-2675, if required by 49 CFR Section 171.15;

(b) Report in writing to the Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, Department of Transportation, Washington, D.C. 20590, if required by 49 CFR Section 171.16; and

(c) A water (bulk shipment) transporter who has discharged hazardous wastes must give the same notice as required by 33 CFR 153.203 for oil and hazardous substances.

(4) If a discharge of hazardous waste occurs and the Secretary determines that immediate removal of the waste is necessary to protect human health or the environment, the Secretary may contain and remove the waste and authorize its removal by uncertified transporters without the preparation of a manifest. Such hazardous waste may be transported to a site authorized by the Secretary under the provisions of Section 7-505 to temporarily accept hazardous waste generated during an emergency cleanup of a discharge.

(5) All clean up debris and residues must be transported ultimately to either:

(a) A certified hazardous waste treatment, storage, or disposal facility;

(b) A person authorized by the Secretary to use such waste if the waste has been delisted in accordance with Section 7-217;

(c) Some other location specified and authorized by the Secretary to receive clean up debris and residues if the waste has been delisted in accordance with Section 7-217; or

(d) For hazardous waste regulated only by the State of Vermont and not regulated by EPA as hazardous waste, to a facility licensed or authorized to receive such wastes by the state in which the facility is located.

7-106 LAND DISPOSAL RESTRICTIONS

(1) Certain hazardous wastes shall not be disposed of in or on the land. 40 CFR Part 268, which is contained in Appendix VI, identifies those wastes which shall not be land disposed and describes the limited circumstances under which an otherwise prohibited waste may continue to be land disposed.

(2) In addition to the prohibitions of Appendix VI, the Secretary may restrict the land

disposal of any hazardous waste in the State of Vermont:

(a) Which may present an undue risk to human health or the environment, immediately or over a period of time; or

(b) Which would be incompatible with the Groundwater Protection Rule and Strategy of Chapter 12 of the Environmental Protection Rules.

7-107 ENFORCEMENT

(1) Information that the generation, transportation, treatment, storage or disposal of hazardous waste may present an actual or potential threat to human health or the environment, or is a violation of the Waste Management Act, or these regulations, or any term or condition of certification, order, or assurance, may serve as grounds for an enforcement action by the Secretary, including, but not limited to:

(a) Issuance of an order to immediately cease and desist any operation or practice;

(b) Issuance of an order to correct or prevent environmental damage likely to result from any deficiency in operation or practice;

(c) Issuance of an order suspending or revoking any certification and requiring temporary or permanent cessation of the operation of such facility;

(d) A request that the Attorney General or appropriate State's Attorney commence an action for injunctive relief, the imposition of penalties and fines provided in 10 V.S.A. Section 6612 and/or 3 V.S.A. Section 2822, or other relief as may be appropriate.

(2) In an action to enforce the regulations of this chapter, anyone raising a claim that a certain material is not a hazardous 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. 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, must be provided. Owners and operators of facilities claiming that they are actually recycling materials must show that they have the necessary equipment to do so.

7-108 SIGNATORIES TO CERTIFICATION APPLICATIONS AND REPORTS

For all facilities and activities regulated under Subchapter 5:

(1) All certification applications shall be signed as follows:

(a) 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 decision-making functions for the corporation, or

(ii) The manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having a 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.

(b) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or

(c) 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.

(2) All reports required by certifications and other information requested or required by the Secretary shall be signed by a person described in Section 7-108(1), or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(a) The authorization is made in writing by a person described in Section 7-108(1);

(b) 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 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

(c) The written authorization is submitted to the Secretary.

(3) If an authorization under Section 7-108(2) is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirement of Section 7-108(2) must

be submitted to the Secretary prior to or together with any documents signed by an authorized representative.

(4) Certification. Any person signing a document under Section 7-108(1) or 7-108(2) 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 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.

(5) The certification in Section 7-108(4) need not appear on a manifest completed in accordance with subchapter 7 of this chapter.

7-109 INCORPORATIONS BY REFERENCE

(1) When reference is made to CFR titles, their parts, subparts, or sections, the reference is to titles of the Code of Federal Regulations as they existed on July 1, 1990.

(2) When reference is made to forms, the following forms are incorporated by reference:

(a) Uniform Certification Conditions [January 1, 1990];

(b) Application for Certification of a Hazardous Waste Treatment, Storage or Disposal Facility (Application for Facility Certification) [January 1, 1990];

(c) Notification of Hazardous Waste Activity Form [January 1, 1988];

(d) Exemption Procedures for the Recycle and Reuse of Hazardous Waste (Recycle and Reuse Form) [January 1, 1990];

(e) Petition Procedure for the Listing and Delisting of Hazardous Waste (Listing and Delisting Form) [January 1, 1990];

(f) Application for Certification as a Hazardous Waste Transporter (Application for Transporter Certification) [April 1, 1990];

(g) Hazardous Waste Annual Report - Transporters (Transporter Annual Report Form) [January 1, 1990];

(h) Hazardous Waste Annual Report Form - Exports (Export Annual Report Form) [January 1, 1990];

(i) USEPA 1989 Hazardous Waste Report: Instructions and Form (USEPA Annual Report Form) [November 1989];

(j) Hazardous Waste Annual Report Form (Vermont Annual Report Form) [January 1, 1990];

(k) Uniform Hazardous Waste Manifest (Manifest) [September 1988]; and

(l) Application for Interim Certification [January 1, 1990].

7-110 IMPLEMENTATION

The Secretary shall consult with other agencies of state government if he or she has reason to conclude that any action or decision hereunder may conflict with any statute or regulation within the authority of such other agency.

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Subchapter 2: IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

7-201 Purpose, Scope, Applicability

This subchapter identifies or otherwise describes those wastes which are subject to regulation under this chapter. It establishes requirements for classifying waste as non-hazardous and prescribes testing methods and procedures.

7-202 Hazardous Waste Determination

(1) "Hazardous Waste" means any solid waste or combination of solid wastes which meets the definition in Section 7-103, including but not limited to:

(a) Any waste which exhibits the characteristics described in Sections 7-204 through 7-207;

(b) Any waste which is listed in Sections 7-210 through 7-214;

(c) Any mixture of a solid waste and a hazardous waste except as exempted in Section 7-203(11);

(d) Any waste generated from the treatment, storage, disposal, or use of a hazardous waste including any sludge, spill residue, ash, emission control dust, leachate, and precipitation runoff which comes in contact with the waste itself;

(e) Any waste derived from a waste listed in Sections 7-210 through 7-214;

(f) Any waste generated from the discharge of a material which exhibits a characteristic described in Sections 7-204 through 7-207 or is listed in Sections 7-210 through 7-214;

(g) Any waste from tank bottoms or other residues of materials in containers or tanks which exhibit a characteristic described in Sections 7-204 through 7-207 or are listed in Sections 7-210 through 7-214;

(h) Any residues from a container or from the inner liner of a container which held a material which exhibits a characteristic described in Sections 7-204 through 7-207 or is listed in Sections 7-210 through 7-214, except as exempted in Section 7-203(10); and

(i) Any waste transported into the State of Vermont which is classified as a hazardous waste in the state in which that waste was generated.

(2) It shall be the responsibility of the person who generates or who is in control of any waste to initially determine whether such waste is hazardous by determining whether or not such waste is described in subsection (1) above and by applying knowledge of the hazardous characteristic of the waste in light of the materials

or the processes used. The Secretary may require information relative to the hazard determination on any waste or may require any information necessary to make such determination.

(3) The waste determination described above shall be done using suitable available constituent product information, tests and procedures specified in Appendix V of this subchapter and/or any other tests specified by the Resource Conservation and Recovery Act of 1976 and amendments thereto and the regulations promulgated thereunder.

(4) If a waste is identified by both EPA and Vermont hazardous waste numbers and descriptions, the EPA hazardous waste number and description shall be used for the purposes of this chapter.

7-203 EXEMPTIONS

The following wastes are exempted from the provisions of these regulations:

(1) Household refuse;

(2) Household sewage and any mixture of household sewage and other wastes that passes through a sewer system to a publicly owned treatment works for treatment in accordance with the provisions of a permit issued under 10 V.S.A. Chapter 47;

(3) 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;

(4) Mining overburden returned to the mine site;

(5) Solid waste from the extraction, benefication, and processing of ores and minerals (including coal), including phosphate rock and overburden from the mining of uranium ore;

(6) In the case of a waste which is regulated because it exhibits one or more of the characteristics in Sections 7-204 through 7-207, when the waste no longer exhibits any characteristic. However, a waste that exhibits the characteristic of toxicity that has been land disposed shall never cease to be a hazardous waste.

(7) In the case of any waste consisting of, containing, or derived from any waste or any product or constituent listed in Sections 7-210 through 7-214 of this subchapter, when it has been determined by the Secretary that the waste is not hazardous pursuant to Section 7-216 or 7-217.

(8) 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 until it exits the unit in which it was generated provided:

(a) The unit is not a surface impoundment; and

(b) The hazardous waste remains in the unit for less than ninety (90) days after the unit ceases to be operated for manufacturing, storage, or transportation of a product or raw material.

(9) Samples

(a) Except as provided in paragraph (9)(b) below, samples collected for the sole purpose of testing to determine their properties, characteristics or composition when:

(i) The sample is being transported to a laboratory for the purpose of testing;

(ii) The sample is being transported back to the sample collector after testing;

(iii) The sample is being stored by the sample collector before transport to a laboratory for testing;

(iv) The sample is being stored in a laboratory before testing;

(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).

(b) In order to qualify for the exemption in (9)(a)(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) and 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 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.

(c) 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 (9)(a) of this subsection.

(d) Treatability Study Samples as provided in 40 CFR 261.4(e) & (f).

(10) Containers and inner liners from containers of hazardous waste, provided that the containers and inner liners are empty. Containers and inner liners are empty under the following conditions:

(a) For those containers or inner liners which have held hazardous waste, when all material has been removed using the practices commonly employed to remove materials from that type of container, and

(i) No more than one inch of residue remains on the bottom of the container or inner liner; or

(ii) 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.

(iii) 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.

(b) For those containers that held a hazardous waste that is a compressed gas, when the pressure in the container approaches atmospheric pressure.

(c) For those containers or inner liners which have held acutely hazardous waste, pesticidal waste, or obsolete pesticide products:

(i) When the container or inner liner has been triple rinsed with a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;

(ii) When the container or inner liner is cleaned by a method which the generator has demonstrated 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.

(11) Mixtures of solid waste and hazardous waste provided that:

(a) The hazardous waste in the mixture is defined as hazardous solely due to one or more characteristics identified in Sections 7-204 through 7-207 and the resultant mixture no longer exhibits such characteristics. Any intentional mixing to render a waste non-hazardous is treatment of hazardous waste subject to the certification requirements in Subchapter 5.

(b) Mixtures of solid and hazardous waste produced by a small quantity generator unless:

(i) The mixture exhibits any of the characteristics of hazardous waste listed in Sections 7-204 through 7-207; and

(ii) The amount of hazardous waste in the mixture is equal to or greater than the small quantity exclusion level in Section 7-303.

(12) Water soluble and synthetic coolant oils provided that:

(a) They do not exhibit a characteristic as defined in Sections 7-204 through 7-207;

(b) They are recycled (e.g. ultrafiltration) or otherwise treated;

(c) Any treatment residue is managed as a hazardous waste;

(d) Any contaminated water resulting from recycling or treatment is either discharged in accordance with 10 V.S.A. Chapter 47, or, if treated out of state, discharged in accordance with the relevant laws, or managed as a hazardous waste; and

(e) They are offered for transport only to a transporter with certification under Subchapter 4.

(13) In the case of an infectious waste, provided that the waste does not exhibit a characteristic as defined in Sections 7-204 through 7-207 and provided the waste is disinfected, sterilized or incinerated at the site of its generation.

(14) (a) Waste oils that exhibit one or more of the characteristics of hazardous waste but is recycled in some manner other than being burned for energy recovery.

(b) Waste crankcase and motor vehicle oils provided such wastes:

(i) Do not exhibit a characteristic as defined in Sections 7-204 through 7-207;

(ii) Are stored in a manner such that no disposal occurs; and

(iii) Are offered to a certified hazardous waste transporter for transport to a facility, marketer or collector such that the waste oil is burned for energy recovery in accordance with Subchapter 6.

(15) Waste oil filters from motor vehicles that do not exhibit a characteristic as specified in 7-204 through 7-207, provided:

(a) the filters are drained for at least four hours, or crushed and drained, and

(b) all drained oils are collected and managed subject to these regulations.

(16) Petroleum contaminated soils and contaminated carbon filtration media destined for treatment or disposal in accordance with Agency guidelines, provided that:

(a) In the case of soils contaminated with waste crankcase or automotive oils, the amount of contaminated soil landfarmed on any given site does not exceed 20 cubic yards in volume; and

(b) The contaminated soil or filtration media does not exhibit a characteristic as defined in sections 7-204 through 7-207, with the exception that soils subject to regulation under 40 CFR Part 280 are not subject to regulation for the waste codes of D018 through D043 of 7-207; and

(c) The petroleum contaminated soil does not contain wastes listed in 7-211 through 7-214, a F001 through F028 waste of 7-210, or a VT01 waste of 7-210.

(17) Industrial discharges subject to regulation under the Water Pollution Control Act, 10 V.S.A. Chapter 47. Note: This exclusion applies only to the actual point source discharge. It does not exclude wastewaters while they are being collected, stored, or treated before discharge nor does it exclude sludges that are generated by industrial wastewater treatment.

7-204 CHARACTERISTIC OF IGNITABILITY

(1) A waste is an ignitable hazardous waste if a representative sample of the waste has any of the following properties:

(a) It is a liquid and has a flash point of less than 60°C, which is approximately 140°F. However, an aqueous solution of alcohol which contains less than 24 percent alcohol by volume will not be considered an ignitable waste;

(b) It is not a liquid and 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;

(c) It is an ignitable compressed gas as defined in 49 CFR 173.300; or

(d) It is an oxidizer, such as chlorate, perchlorate, nitrate, nitrite, permanganate, or inorganic peroxide that yields oxygen readily to stimulate the combustion of organic matter.

(2) A waste which exhibits the characteristic of ignitability, and is not listed as a federal hazardous waste in 7-210 through 7-214, has the EPA Hazardous Waste Number of D001.

7-205 CHARACTERISTIC OF CORROSIVITY

(1) A waste is a corrosive hazardous waste if a representative sample of the waste has any of the following properties:

(a) It is an aqueous solution which has a pH of less than or equal to 2 or greater than or equal to 12.5; or

(b) It is a liquid and corrodes steel (type SAE 1020) at a rate greater than 0.250 inch per year at a test temperature of 55°C (130°F).

(2) A waste that exhibits the characteristic of corrosivity, and is not listed as a federal

hazardous waste in 7-210 through 7-214 has the EPA Hazardous Waste Number of D002.

7-206 CHARACTERISTIC OF REACTIVITY

(1) A waste is a reactive hazardous waste if a representative sample of the waste has any of the following properties:

(a) It is normally unstable and readily undergoes violent change without detonating;

(b) It reacts violently with water;

(c) It forms potentially explosive mixtures with water;

(d) When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or to the environment;

(e) It is a cyanide or sulfide bearing waste which, when exposed to a pH condition between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or to the environment;

(f) It is capable of detonation or an explosive reaction if it is subjected to a strong initiating source or if heated under confinement;

(g) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure;

(h) It is a forbidden explosive as defined in 49 CFR Section 173.51, or a Class A explosive as defined in 49 CFR Section 173.53, or a Class B explosive as defined in 49 CFR Section 173.88.

(2) A waste that exhibits the characteristic of reactivity, and is not listed as a federal hazardous waste in 7-210 through 7-214, has the EPA Hazardous Waste Number of D003.

7-207 CHARACTERISTIC OF TOXICITY

(1) A waste is a hazardous waste if, using the Toxicity Characteristic Leaching Procedure (TCLP) described in Appendix VIII, 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% filterable solids, the waste itself, after

filtering using the methodology outlined in Appendix VIII, is considered to be the extract for the purposes of this section.

(2) A waste that exhibits the characteristic of toxicity, but is not listed as a hazardous waste in Sections 7-210 through 7-214, has the EPA Hazardous Waste Number specified in Table 1 which corresponds to the toxic contaminant causing it to be hazardous.

Table 1

MAXIMUM CONCENTRATION OF CONTAMINANTS FOR THE CHARACTERISTIC OF TOXICITY

Hazardous Waste Number	Contaminant	CAS Number[1]	Maximum Concentration (milligrams per liter)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D006	Cadmium	7440-43-9	1.0
D007	Chromium	7440-47-3	5.0
D008	Lead	7439-92-1	5.0
D009	Mercury	7439-97-6	0.2
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D012	Endrin (1,2,3,4,10,10-Hexachloro-1,7-epoxy-1,4,4a,5,6,7,8 8a-octahydro-1,4-endo, endo-5,8-dimethano-naphthalene)	72-20-8	0.02

[1] Chemical abstracts service number.

Table 1
(continued)
MAXIMUM CONCENTRATIONS OF CONTAMINANTS
FOR THE CHARACTERISTIC OF TOXICITY

Hazardous Waste Number	Contaminant	CAS Number	Maximum Concentration (milligrams per liter)
D013	Lindane (1,2,3,4,5,6-Hexachlorocyclo-hexane, gamma isomer)	58-89-9	0.4
D014	Methoxychlor (1,1,1-Trichloro-2, 2-bis[p-methoxyphenyl] ethane)	72-43-5	10.0
D015	Toxaphene (C10H10Cl8, Technical chlorinated camphene, 67 to 69 percent chlorine)	8001-35-2	0.5
D016	2,4-D (2,4-Dichlorophenoxyacetic acid)	94-75-7	10.0
D017	2,4,5-TP Silvex (2,4,5-Trichloro-phenoxypropionic acid)	93-72-1	1.0
D018	Benzene	71-43-2	0.5
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
D023	o-Cresol	95-48-7	200.0[2]
D024	m-Cresol	108-39-4	200.0[2]
D025	p-Cresol	106-44-5	200.0[2]

[2] If 0-, 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.

Table 1
(continued)
MAXIMUM CONCENTRATIONS OF CONTAMINANTS
FOR THE CHARACTERISTIC OF TOXICITY

Hazardous Waste Number	Contaminant	CAS Number	Maximum Concentration (milligrams per liter)
D026	Cresol	.....	200.0[2]
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	0.13[3]
D031	Heptachlor (and its epoxide)	76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	0.13[3]
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
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	5.0[3]
D039	Tetrachloroethylene	127-18-4	0.7
D040	Trichloroethylene	79-01-6	0.5

[3] Quantitation limit is greater than the calculated regulatory level. The quantitation limit therefore becomes the regulatory level.

Table 1
(continued)
MAXIMUM CONCENTRATIONS OF CONTAMINANTS
FOR THE CHARACTERISTIC OF TOXICITY

Hazardous Waste Number	Contaminant	CAS Number	Maximum Concentration (milligrams per liter)
D041	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	2.0
D043	Vinyl Chloride	75-01-4	0.2
VT12	Nickel	7440-02-0	15.0
VT13	Zinc	7440-66-6	250.0

7-208 [Deleted]

7-209 LISTS OF HAZARDOUS WASTES

(1) Sections 7-210 through 7-214 contain five lists of hazardous wastes. Section 7-210 contains a list from non-specific sources. Section 7-211 contains a list of hazardous wastes produced by specific industries. Section 7-212 is a list of hazardous constituents which may render hazardous a waste which contains any such constituents. Section 7-213 is a list of commercial chemical products which, if discarded or intended to be discarded in pure or off-specification form, constitute hazardous waste. Section 7-214 is a list of acutely hazardous wastes.

(2) The following hazardous wastes listed in Section 7-210 are subject to the exclusion limits for acutely hazardous wastes established in Section 7-303: Hazardous Waste Nos. F020,F021, F022, F023, F026, F027, and F028.

(3) The wastes listed in Sections 7-210, 7-211, 7-213 and 7-214 are identified as toxic (T), reactive (R), corrosive (C), ignitable (I), acutely hazardous (H) or a combination thereof.

7-210 HAZARDOUS WASTES FROM NON-SPECIFIC SOURCES

The following wastes are listed hazardous wastes from non-specific sources:

Industry & EPA hazardous waste number	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 spent solvent mixtures.	(T)
F002.....	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, 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 or those listed in F001, F004 or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.	(T)
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; and 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)[4]
F004.....	The following spent non-halogenated solvents: Cresols and cresylic acid and nitrobenzene; all spent solvent	(T)

[4](I,T) should be used to specify mixtures containing ignitable and toxic constituents.

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 still bottoms from the recovery of these spent solvents and spent solvent mixtures.

F005..... The following spent non-halogenated solvents: Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 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, or F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures. (I,T)

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 of 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 waste water 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. (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 (H)

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).

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)

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 2,4,5-trichlorophenol). (H)

F024..... Wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes from the production of chlorinated aliphatic hydrocarbons, having carbon content from one to five, utilizing free radical catalyzed processes. (This listing does not include light ends, spent filters and filter aids, spent desiccants, wastewater, wastewater treatment sludges, spent catalysts and wastes listed in Appendix I). (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-, 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 Hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component). (H)

F028..... Residues resulting from the incineration or thermal treatment of (T)

soil contaminated with EPA Hazardous Waste Nos. F020, F021, F023, F026, and F027.

Vermont Listed Wastes

[Note: A characteristic waste or a federally listed waste must be identified by its EPA waste code - see 7-202(4)].

VT 01....	Wastes containing polychlorinated biphenyls (PCB) in concentrations equal or greater than 50 parts per million.	(T)
VT 02....	Waste containing greater than 5% by weight of petroleum distillates with melting points of less than 100°F, including but not limited to kerosene, fuel oil, hydraulic oils, lubricating oils, penetrating oils, tramp oils, quenching oils, and crankcase and automotive oils which have not been exempted under Section 7-203(14). Note: Waste petroleum distillates with a flashpoint less than 140°F are classified as D001 (ignitable).	(I,T)
VT 03....	Waste water soluble oils (which have not been exempted under section 7-203(12)).	(T)
VT 04....	[Deleted]	
VT 05....	Metal grinding swarfs and sludges.	(T)
VT 06....	Pesticidal wastes and obsolete pesticidal products not specifically listed otherwise in Subchapter 2.	(T)
VT 07....	Infectious waste from hospitals, clinics, mortuaries, laboratories, patient care facilities and the offices of medical, dental or veterinary practices, except as provided in Section 7-203(13).	(T)
VT 08....	Waste ethylene glycol based coolants, antifreezes and solutions containing greater than 700 ppm of ethylene glycol.	(T)
VT 09....	All residues from the bottoms of tanks (tank bottoms) containing any materials which exhibit a characteristic described in Sections 7-204 through 7-207 or are listed in Sections 7-210 through 7-214.	(I,T,C,R,H)
VT 10....	Waste organic solvent based paint and inks, and paint varnish remover or stripper including, but not limited to, sludges and skimmings.	(I,T,C)
VT 11....	Wastes determined to be hazardous under provisions of Section 7-212 or 7-215.	(I,T,C,R,H)

7-211 HAZARDOUS WASTES FROM SPECIFIC SOURCES

Hazardous wastes from specific sources are listed in Appendix I.

7-212 HAZARDOUS COMPONENT WASTES

Wastes containing any of the hazardous constituents listed in Appendix II are hazardous wastes when:

(1) The waste is not excluded from regulation under Section 7-203; and

(2) The Secretary concludes, following the procedures in Section 7-215, that the waste meets the definition of hazardous waste at section 7-103(18).

7-213 HAZARDOUS WASTES WHICH ARE DISCARDED COMMERCIAL CHEMICAL PRODUCTS

The following materials or items are hazardous waste if and when they are discarded or intended to be discarded, 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, 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.

(1) Any commercial chemical product or manufacturing chemical intermediate having the generic name listed in Appendix III;

(2) Any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in Appendix III;

(3) Any residue or contaminated soil, water or other debris resulting from the clean-up of a spill into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in Appendix III, or any residue or contaminated soil, water or other debris resulting from the clean-up of a spill into or on any land or water of any off-specification chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in Appendix III.

Note: 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.

7-214 ACUTELY HAZARDOUS WASTES

The following materials or items are acutely hazardous wastes if and when they are discarded or intended to be discarded, 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, when they are contained in products that are applied to the land in lieu of their original intended use, or when, in lieu of the 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.

(1) The wastes with the following Hazardous Waste Numbers in Section 7-210 of this subchapter: F020, F021, F022, F023, F026, F027, and F028;

(2) Any commercial chemical product or manufacturing chemical intermediate having the generic name listed in Appendix IV;

(3) Any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in Appendix IV.

(4) Any residue from a container or from the inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic name listed in Appendix IV, unless the container is an empty container as defined in Section 7-203(10).

(5) Any residue from a container or from an inner liner that has held any off-specification chemical product and manufacturing chemical intermediate, which, if it met specifications, would have the generic name listed in Appendix IV, unless the container is empty as defined in Section 7-203(10).

(6) Any residue or contaminated soil, water or other debris resulting from the clean-up of a spill into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in Appendix IV, 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 or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in Appendix IV.

Note: 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.

7-215 LISTING OF A HAZARDOUS WASTE

(1) Any person requesting the addition of a generic class of wastes to the lists at Sections 7-210 through 7-214, must file a petition for rule making with the

Secretary.

(2) The Secretary, upon petition or on his or her own motion, may, on a case-by-case basis, make the determination that a waste generated by a particular generator or treated, stored or disposed of by a particular facility, meets the definition of hazardous waste at Section 7-103.

(a) Upon making the determination that a particular waste is hazardous, the Secretary shall notify the waste generator of this determination by certified letter. The letter shall include a fact sheet which briefly sets forth the principal facts and significant factual, methodological, and policy questions concerning the hazard determination.

(b) Within 30 days following receipt of a hazard determination, the generator may request a hearing before the Secretary to contest that determination. The request for hearing shall state the technical and legal questions at issue and shall contain the necessary documents to support the request. This hearing shall not be a contested case hearing as defined by 3 V.S.A. Section 801(b)(2).

(c) If no request for hearing is filed within 30 days, the generator shall be deemed to have accepted the hazard determination for the waste in question.

(3) When making a determination under this section, the Secretary shall examine and consider the following factors:

(a) The nature of the hazard presented by the waste;

(b) The amount and concentration of all hazardous constituents in the waste;

(c) The potential of all hazardous constituents in the waste or any toxic degradation product of such hazardous constituents to migrate from the waste into the environment.

(d) The persistence of all hazardous constituents in the waste or any toxic degradation product of such hazardous constituents;

(e) The degree to which all hazardous constituents in the waste or any toxic degradation product of such hazardous constituents bioaccumulate in ecosystems;

(f) The plausible types of improper management to which the waste could be subjected;

(g) The quantity of waste involved;

(h) The nature and severity of the damage to human health and the environment that has occurred as a result of the improper management of the type of waste involved;

(i) Actions taken by other governmental agencies or regulatory programs based on the hazard to human health or the environment posed by the waste or any hazardous constituent in the waste; and

(j) Such other factors as may be appropriate.

(4) Prior to making any determination under this section, the Secretary shall give notice to the Commissioner of Health and the Commissioner of Labor and Industry and may then receive advice and information on the health effects of such determination.

7-216 DELISTING OF A HAZARDOUS WASTE

(1) Generators may petition the Secretary to classify their waste as non-hazardous, if they generate either a waste listed at Sections 7-210 through 7-214 or a mixture which contains a waste listed at Sections 7-210 through 7-214.

(2) The Secretary, upon petition or on his or her own motion, may make the determination that a waste which is generated by a particular generator or treated, stored, or disposed of by a particular facility does not meet the definition of hazardous waste at Section 7-103 subject to the restrictions listed below.

(3) Any person seeking to exclude a waste at a particular generating facility from lists in Subpart D of 40 CFR Part 261 may petition for a regulatory amendment under 40 CFR Sections 260.20 and 260.22. The Administrator of EPA shall retain the authority to exclude such wastes.

(4) For any waste listed at Sections 7-210 through 7-214 of this subchapter and not listed by EPA as a hazardous waste, the petition to delist shall be made on the delisting form entitled Petition Procedures for the Listing and Delisting of Hazardous Waste, provided by the Secretary.

(5) After receipt of a petition under this section the Secretary may request any additional information which may be reasonably required to evaluate the petition.

(6) The Secretary shall evaluate each delisting petition using the procedures described in Section 7-215(2).

(7) When making a determination under this section, the Secretary shall examine and consider the factors in Section 7-215(3).

(8) Except as provided in Section 7-217, prior to making any determination under this section, the Secretary shall give notice to the Commissioner of Health and the Commissioner of Labor and Industry and may then receive advice and information on the health effects of such determination.

7-217 DELISTING OF SPILL CLEAN UP DEBRIS AND RESIDUES

The Secretary may delist clean up debris and residues which are not regulated by EPA as hazardous wastes resulting from an emergency action in Section 7-105, after considering the factors in Section 7-215(3), without consulting the Commissioners of Health and Labor and Industry.

7-218 SAMPLING AND ANALYSIS METHODOLOGY

(1) Appendix V specifies the methodologies to be employed in sampling and analyzing wastes as required throughout this chapter.

(2) Any person seeking to add a testing or analytical method to Appendix V shall petition to the Administrator of EPA in accordance with 40 Sections CFR 260.20 and 260.21.

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Subchapter 3: REQUIREMENTS FOR GENERATORS OF HAZARDOUS WASTE

7-301 Purpose, Scope, Applicability

This subchapter describes and establishes the responsibilities for generators of hazardous waste. As all generators must store the waste that they generate for some amount of time, this subchapter describes the requirements for short-term storage of hazardous waste. This subchapter also distinguishes between large and small quantity generators of hazardous waste. In determining the quantity of hazardous waste generated, a generator shall count all wastes generated.

7-302 Definition of Generator

A generator is any person, by site, whose act or process produces hazardous waste or whose act first causes hazardous waste to become subject to regulation. This definition includes:

(1) Any person who imports hazardous waste into Vermont from a foreign country;

(2) Any owner or operator of a treatment, storage or disposal facility who initiates a shipment of hazardous waste from such facility; and

(3) Any transporter who mixes wastes of different U.S. DOT shipping descriptions or mixes wastes of the same DOT shipping descriptions from different generators without a written consent of commingling signed by each generator and approved by the Secretary.

7-303 Conditionally Exempt Small Quantity Generators

(1) A generator is a conditionally exempt small quantity generator for the calendar year if that person generates less than:

(a) 220 pounds (100 kilograms) of hazardous waste in each and every month of the year; and

(b) 2.2 pounds (1 kilogram) of acutely hazardous waste in each and every month of the year; and

(c) 220 pounds (100 kilograms) of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill of any acutely hazardous waste in each and every month of the year; and

has accumulated less than 2200 pounds (1000 kilograms) of hazardous waste, 2.2 pounds (one kilogram) of acutely hazardous waste, or 220 pounds (100 kilograms) of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill of any acutely hazardous waste at any time.

(2) As an alternative to the determination method described in subsection (1) above, the Secretary may allow a generator upon written request to be considered a conditionally exempt small quantity generator for the month(s) that he or she generates:

(a) less than 220 pounds (100 kilograms) of hazardous waste; and

(b) less than 2.2 pounds (one kilogram) of acutely hazardous waste; and

(c) less than 220 pounds (100 kilograms) of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill of any acutely hazardous waste in any one month; and

has accumulated less than 2200 pounds (1000 kilograms) of hazardous waste, 2.2 pounds (one kilogram) of acutely hazardous waste, or 220 pounds (100 kilograms) of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a spill of any acutely hazardous waste at any time.

(3) A conditionally exempt small quantity generator is exempt from the requirements of this chapter except as provided for in subsections (a), (b), and (c) below:

(a) A conditionally exempt small quantity generator is exempt from these regulations except for the following requirements:

(i) Notification under Section 7-104;

(ii) Annual report, if required under Section 7-802;

(iii) Hazardous waste determination under Section 7-304;

(iv) EPA identification number under Section 7-305; and

(v) The requirements of Section 7-309(5) and 40 CFR 265.201.

(b) A conditionally exempt small quantity generator shall handle hazardous waste by one of the following methods:

(i) Send the waste to an off-site hazardous waste treatment, storage or disposal facility which if located in the United States is permitted under 40 CFR Part 270, is in interim status under 40 CFR Parts 270 and 265, or is authorized to manage hazardous waste by a state with a hazardous waste management program approved under 40 CFR Part 271;

(ii) Send the waste to a certified solid waste management facility in

Vermont allowed to accept small quantities of hazardous waste, if not prohibited under subsection (c) below, after notifying the solid waste management facility owner or operator as to waste types and quantities and receiving written acknowledgement from the solid waste management facility owner or operator;

(iii) Send the waste to a facility which beneficially uses or reuses or legitimately recycles or reclaims its waste or treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation;

(iv) If a conditionally exempt small quantity generator's wastes are mixed with waste oil, the mixture is subject to Section 7-606(2) 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; or

(v) Otherwise treat, store, or dispose of the waste if the generator has submitted a written request for an alternative handling method to the Secretary and the Secretary has determined that the proposed handling method will not have an adverse impact on human health and the environment. A small quantity generator shall not treat, store, or dispose of waste under this section until receiving written approval from the Secretary for such method.

(c) No waste containing tetrachloroethylene (perchloroethylene) which is produced by a small quantity generator shall be disposed of in any solid waste landfill in the state.

(4) Farmers

A farmer disposing of pesticidal wastes from his or her own use is exempt from regulation provided:

(a) The emptied pesticide container is triple rinsed in accordance with the provisions of Section 7-203(10); and

(b) The pesticide residues are disposed of on the farmer's own farm in a manner consistent with the disposal instructions on the pesticide label.

(5) Accumulation Limits

If any person generates or accumulates hazardous wastes in amounts exceeding the limits specified in this section, that person becomes a generator and is subject to full regulation under this chapter.

7-304 HAZARDOUS WASTE DETERMINATION

Any person who generates a solid waste shall determine if that waste is a hazardous waste in accordance with Section 7-202.

7-305 IDENTIFICATION NUMBERS

(1) No generator shall treat, store, dispose of, transport, or offer for transport hazardous waste without having obtained an EPA identification number by applying to the Secretary on the Notification of Hazardous Waste Activity form provided.

(2) A small quantity generator of hazardous waste who sends waste to a certified hazardous waste treatment, storage, or disposal facility on a manifest shall obtain a temporary or permanent EPA identification number from the Secretary for the purpose of completing the manifest.

7-306 OFFERING HAZARDOUS WASTE FOR TRANSPORTATION

(1) A generator shall not offer any hazardous waste, as defined in 40 CFR Part 261, to transporters or to treatment, storage, or disposal facilities that have not received an EPA identification number.

(2) For any hazardous waste not defined as hazardous in 40 CFR Part 261, a generator shall not transfer such waste to a transporter without an EPA identification number unless:

(a) The generator is specifically exempted from manifesting requirements under Section 7-611 for a recycled waste; or

(b) The Secretary has provided written authorization to do so after determining that the practice will not pose a threat to human health or the environment.

(3) A generator shall transport or offer for transport hazardous waste only to a designated facility. If the facility is in a state other than Vermont and if the wastes are not hazardous in that state, the facility must have that state's authorization to receive such waste.

(4) A generator shall not transport or offer for transport a hazardous waste for off-site treatment, storage, disposal or use without completing the generator's portion of the Hazardous Waste Manifest, unless exempted from these requirements under Section 7-611.

7-307 PRE-TRANSPORT REQUIREMENTS

Before transporting hazardous waste or offering hazardous waste for transportation off-

site, the generator shall:

(1) Package the waste in accordance with the applicable Department of Transportation regulations under 49 CFR Parts 173, 178, and 179;

(2) Label each package in accordance with the applicable Department of Transportation regulations on hazardous materials under 49 CFR Part 172.

(3) Mark each package in accordance with the applicable Department of Transportation regulations on hazardous materials under 49 CFR Part 172. For each container of 110 gallons or less used in such transportation, such marking shall include the following words and information displayed in accordance with the requirements of 49 CFR 172.304: the generator's name, address and EPA identification number; the proper shipping name and identification number (preceded by "UN" or "NA" as appropriate) assigned to the waste material; the manifest document number; the date upon which the period of accumulation begins; and the following language: "Hazardous Waste - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U. S. Environmental Protection Agency."

(4) Placard or offer the initial transporter the appropriate placards according to federal Department of Transportation regulations for hazardous materials under 49 CFR Part 172, Subpart F.

7-308 SHORT-TERM STORAGE OF HAZARDOUS WASTE BY THE GENERATOR

(1) A generator may store the hazardous waste that he or she generates at the site of generation without obtaining certification for such storage provided that:

(a) The generator stores the waste in containers or above ground tanks in accordance with the requirements of this section and Sections 7-309 and 7-310; and

(b) The generator transports the waste off-site within ninety days of the date when the waste first started to accumulate, unless the waste accumulation is conducted according to subsection (5) below.

(2) 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 obtaining certification provided that the quantity of waste accumulated on-site never exceeds 6000 kilograms.

(3) A generator may be granted up to a thirty (30) day extension of the short-term storage limits specified above at the discretion of the Secretary due to unforeseen temporary and uncontrollable circumstances.

(4) Containers, packages, and tanks used for the storage of hazardous wastes shall be clearly marked at the time they are first used to accumulate or store waste. Such marking shall include: the generator's name, address, and EPA identification number; the name of the hazardous waste stored therein; the date when the container or tank was first used to accumulate or store hazardous waste and the following language, "Hazardous Waste - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency."

(5) A generator may accumulate as much as 55 gallons of hazardous waste or one quart of acutely hazardous waste 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 obtaining certification as a storage facility and without complying with Section 7-308(1) & (2) provided that:

(a) The waste and the container are chemically compatible such that no leakage occurs and the container is in good condition;

(b) The container holding the waste remains closed except to add or remove waste;

(c) The container is marked with the words "Hazardous Waste" and other words that identify the contents; and

(d) When the amount in such containers is in excess of 55 gallons of hazardous waste or one quart of acutely hazardous waste, the generator shall move the container to a designated storage area within three days and shall indicate on the container label the date when the waste began to accumulate excess amount. During the three day period the generator must continue to comply with Sections 7-309(5)(a), (b) and c(i).

7-309 MANAGEMENT STANDARDS AND REQUIREMENTS FOR SHORT-TERM STORAGE

(1) Inventory and Inspection

(a) A generator shall maintain, at a location apart from the hazardous waste storage area, a list of all hazardous waste currently in storage.

(b) Daily inspections during regular business days shall be made and recorded in a log which shall be kept at the facility for at least three years. The log shall contain a checklist of the items to be inspected which shall include:

(i) Visual inspection of the storage area for rusting, bulging, or leaking containers or tanks;

(ii) Inspection of all safety and emergency equipment required under Section 7-309(2)(a);

(iii) Inspection of adequate aisle space (minimum of 24 inches as specified in Section 7-309(8)(d)) between rows of containers;

(iv) Description of discrepancies or problem areas encountered in the inspection and the corrective actions taken; and

(v) The signature of the inspector and the date of the inspection.

(2) Preparedness and Prevention

Facilities must be maintained and operated to minimize the possibility of fire, explosion or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, ground water, or surface water which could threaten human health or the environment.

(a) 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:

(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.

(b) Testing and maintenance of equipment

All 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.

(c) Access to communications or alarm system

(i) Whenever hazardous waste is being poured, mixed, spread, or otherwise handled, or if there is ever just one employee on the premises while the facility is operating, 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 7-309(2)(a).

(ii) If there is ever just one employee on the premises while the facility is operating, that 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 under section 7-309(2)(a).

(d) Arrangements with local authorities

The owner or operator must attempt to make the following arrangements as appropriate for the type of waste handled at their facility and the potential need for the services of these organizations. Refusal of any authorities to enter into such arrangements must be documented.

(i) 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 the facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes;

(ii) 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;

(iii) Agreements with emergency response teams, emergency response contractors and equipment suppliers; and

(iv) 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.

(3) Contingency Plan

Each owner or operator must have a written contingency plan for their facility designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste constituents to air, soil, ground water, or surface water. 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.

(a) The contingency plan must contain:

(i) A description of the actions facility personnel must take to comply with Sections 7-309(3)(a) and 7-309(3)(e) in response to fires, explosions or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, groundwater 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 40 CFR Part 112 or 1510, or some other emergency or contingency plan, the owner or operator need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements in this subchapter.

(iii) 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 7-309(2)(d).

(iv) An up to date list of names, addresses and phone numbers (office and home) of all persons qualified to act as emergency coordinator. 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) An up to date list of all emergency equipment at the facility, including location, physical description of each item listed and a brief outline of its capabilities.

(vi) An evacuation plan including signals to be used to begin evacuation, evacuation routes and alternate evacuation routes.

(b) Copies of the contingency plan and all revisions must be maintained at the facility and submitted to all local police and fire departments, hospitals, and

state and local emergency response teams that may be called upon to provide emergency services.

(c) The contingency plan must be reviewed and immediately amended whenever:

(i) Applicable regulations are revised;

(ii) The plan fails in an emergency;

(iii) The facility changes 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;

(iv) The list of emergency coordinators changes; or

(v) The list of emergency equipment changes.

(d) At all times there must be at least one employee either at the facility 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 familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the locations and characteristics of waste handled, the location of all records within the facility and the facility layout. This person must have the authority to commit the resources needed to carry out the contingency plan.

(e) Emergency Procedures

Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his or her designee when the emergency coordinator is on call) must do the following immediately:

(i) Activate internal facility alarms or communication systems;

(ii) Notify appropriate state or local agencies with designated response roles if their help is needed;

(iii) If a release has occurred, identify the source, character, amount and extent of any released materials by record review or chemical analysis;

(iv) Assess hazards to human health and the environment, considering all direct and indirect effects;

(v) If the emergency coordinator determines that the facility has had a fire, explosion or release which could threaten human health or the environment outside the facility the coordinator must:

(A) Determine if local evacuation may be necessary, and, if so, notify appropriate local authorities and be available to assist local authorities in evacuation measures; and

(B) Notify the National Response Center (800-424-8802) and indicate his or her name and telephone number; name and address of the facility; time and type of incident; quantity of material(s) involved to the extent known; the extent of any injuries; and the possible hazards to human health or the environment outside the facility.

(vi) 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;

(vii) 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;

(viii) 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; and

(ix) Ensure that in the affected areas of the facility, no waste that may be incompatible with the released material is stored until cleanup procedures are completed and all emergency equipment is cleaned and restored to a useable condition.

(f) Whenever there is an imminent or actual emergency situation, the owner or operator shall:

(i) Notify the Secretary that the facility is in compliance with Section 7-309(3)(e)(ix) before operations are resumed in the affected areas of the facility;

(ii) Maintain on file with the contingency plan the time, date and details

of any incident that requires implementing the contingency plan; and

(iii) Within 15 days after the incident, submit a written report on the incident to the Secretary. 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; and

(G) Estimated quantity and disposition of recovered material that resulted from the incident.

(4) Personnel Training

(a) Facility personnel must successfully complete a program of classroom instruction that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of this chapter.

(b) 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.

(c) 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 cutoff systems;

(iii) Communications or alarm systems;

(iv) Response to fires or explosions;

(v) Response to groundwater contamination incidents; and

(vi) Shutdown of operations.

(d) Facility personnel must successfully complete the program required in Section 7-309(4)(a)-(c) within 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 Section 7-309(4)(a)-(c).

(e) Facility personnel must take part in an annual review of the initial training required under Section 7-309(4)(a)-(c).

(f) The owner or operator must maintain the following documents and records at the facility:

(i) The job title for each position at the facility related to hazardous waste management and the name of the employee filling each job;

(ii) A written job description for each position under Section 7-309(4)(f)(i) which includes the requisite skill, education or other qualifications and duties of personnel assigned to each position;

(iii) 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 Section 7-309(4)(f)(i);

(iv) Records that document that the training or job experience required has been given to and completed by facility personnel in accordance with Section 7-309(4)(a)-(e); and

(v) Training records must be kept on current personnel 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.

(g) The Secretary may independently verify successful completion of the instruction program in Section 7-309(4)(c) by examining trainees, employees or utilizing other appropriate methods.

(5) Use and Management of Containers

(a) 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 section.

(b) Compatibility of waste with container

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.

(c) Management of containers

(i) A container holding hazardous waste must always be closed during storage except when it is necessary to add or remove waste;

(ii) 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;

(iii) Containers holding ignitable or reactive waste must be located at least fifty (50) feet from the property line; and

(iv) Incompatible wastes

(A) Incompatible wastes, or incompatible wastes and materials must not be placed in the same container. Examples of incompatible wastes are provided in Appendix VII.

(B) Hazardous waste must not be placed in an unwashed container that previously held an incompatible waste or material; and

(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.

(6) Use and Management of Tanks

A generator storing hazardous wastes in tanks must comply with all secondary containment, monitoring, tank testing and other requirements in 40 CFR Sections 265.190 through 265.199 except 265.197(c).

(7) Security

(a) A generator must post a sign at each hazardous waste storage area, which must be visible from at least 25 feet with the legend, "Danger-Hazardous Waste Storage Area-Authorized Personnel Only", or similar legend approved by the Secretary.

(b) A generator storing ignitable waste (flash point less than 140°F) must also post a sign at each hazardous waste storage area, which must be visible from 25 feet with the legend, "No Smoking".

(8) Operating Standards

(a) Containers or tanks holding incompatible hazardous wastes must not be stored in the same enclosure, building or structure unless they are segregated in a manner that prevents the wastes from coming into contact with one another under any circumstances (such as spillage or simultaneous leakage).

(b) Disposal of hazardous wastes by evaporation from open containers is prohibited.

(c) Containers of hazardous waste must be stored such that the hazardous waste labeling is visible.

(d) Aisle space between rows of containers must be sufficient to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment and decontamination equipment to any area of facility operation. In no circumstance shall the aisle space be less than twenty-four (24) inches wide.

(9) Design Standards

(a) A generator must accumulate and store hazardous waste upon an impervious surface such as asphalt or concrete except for spill cleanup debris stored in accordance with subsection (9)(c) below.

(b) Except for spill cleanup debris stored in accordance with subsection (9)(c) below, hazardous waste containers may be placed out-of-doors only if they are within a structure that sheds rain and snow.

(c) Hazardous waste which is spill cleanup debris in short-term storage shall be stored in leak-proof containers which are covered so as to prevent contact of the waste with precipitation or run-on from precipitation.

(d) Only hazardous wastes not subject to freezing and expansion may be stored out-of-doors in containers or above-ground tanks unless mechanical or physical means are employed to prevent freezing.

(10) Closure

(a) The owner or operator must close the facility in a manner that:

(i) Minimizes the need for further maintenance;

(ii) 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

(iii) Complies with the closure requirements of this subchapter including but not limited to the requirements of 40 CFR Sections 265.197, 265.228, 265.258, 265.280, 265.310, 265.351, 265.381, and 265.404.

(b) A generator who no longer generates hazardous waste at a site shall remove all hazardous waste to a facility licensed to handle the waste. Remaining containers, tanks, liners, bases, materials, equipment, structures, soil and debris contaminated with hazardous waste or hazardous waste residues shall be decontaminated or disposed of at a facility licensed to handle the waste.

(c) A generator shall provide written notice to the Secretary prior to closure and shall submit to the Secretary, within 90 days of completion of closure, certification that closure was completed in accordance with the provisions of subparagraph (a) above. This certification shall be made by the generator and the Secretary may require certification by an independent registered professional engineer.

7-310 ADDITIONAL REQUIREMENTS

On a case by case basis, any person subject to this subchapter may be required to meet additional requirements when the Secretary determines that such actions are necessary to protect human health or the environment.

Subchapter 4: REQUIREMENTS FOR TRANSPORTERS OF HAZARDOUS WASTE

7-401 Purpose, Scope, Applicability

(1) This subchapter prescribes requirements for all persons transporting hazardous waste within or through Vermont.

(2) This subchapter also applies to transporters of hazardous waste who accept waste only from conditionally exempt small quantity generators when the total amount accepted from all such generators in any shipment exceeds the amounts set forth in Section 7-303(1)(a).

(3) Transporters of recyclable hazardous wastes, including waste oils, shall comply with the requirements of this subchapter unless exempted from some or all of the provisions under Section 7-611.

(4) Any transporter of hazardous waste who has current and proper ICC approval as a common carrier or contract carrier shall not be required to obtain certification under Section 7-405 to transport hazardous waste through Vermont if:

(a) That transporter neither accepts hazardous waste from any location in Vermont nor delivers hazardous waste to any location in Vermont; and

(b) That transporter only passes through Vermont from a state of generation to another state for treatment, storage, disposal or recycling of hazardous waste.

(5) Transporters described in Section 7-401(4) shall comply with all applicable requirements of federal regulations of states in which they pick up or deliver hazardous waste, of Section 7-105 of these regulations, and the Vermont Agency of Transportation regulations.

7-402 Applicability of Other Subchapters

(1) A transporter of hazardous waste shall comply with the generator requirements of Subchapter 3 if that transporter:

(a) Mixes hazardous waste of different DOT shipping descriptions by placing them into a single container;

(b) Mixes hazardous waste of the same DOT shipping descriptions from different generators without a written consent of commingling signed by each generator and approved by the Secretary; or

(c) Transports hazardous waste into Vermont from a foreign country.

(2) A transporter of hazardous waste shall comply with the manifest requirements of Subchapter 7.

(3) In the event of a spill or other discharge of hazardous waste during transport, a transporter shall comply with the emergency action requirements of Section 7-105.

7-403 EXEMPTIONS

(1) This subchapter does not apply to the following:

(a) Transport of hazardous waste by generators within the site where it is generated; and

(b) Transport of hazardous waste within the site of a certified treatment, storage or disposal facility if such transport is done by the owner or operator of the facility.

(2) A transporter who stores hazardous waste at a transfer facility is exempt from the certification requirements of Subchapter 5 provided:

(a) The shipment of waste to the transfer facility is manifested;

(b) The waste is held at the transfer station for a period of ten days or less;

(c) The waste is packaged, labeled, and marked in accordance with 49 CFR Parts 173, 178, and 179; and

(d) The transfer station complies with the standards for short term storage of hazardous waste in Section 7-309.

7-404 PROHIBITIONS

No transporter subject to this subchapter shall:

(1) Remove hazardous waste from the container in which it was placed once it has been manifested and moved from the site of generation until it is accepted at the destination facility except:

(a) Under the emergency provisions of Section 7-105; or

(b) At a designated facility or transfer station with written consent of the generator.

(2) Transport or accept for transport hazardous wastes which are unlabeled or which are in damaged, bulging, leaking, unsuitable or otherwise unsafe containers; or

(3) Transport or accept for transport hazardous wastes which are incompatible with each other such that a danger to public health or safety or the environment could

result from their being transported together.

(4) Accept hazardous waste from a generator unless it is accompanied by a manifest signed in accordance with the provisions of Section 7-702. In the case of exports, a transporter may not accept such waste from a primary exporter or other person (1) if the transporter knows the shipment does not conform to the EPA Acknowledgment of Consent; and (2) unless, in addition to a manifest signed in accordance with the provisions of Section 7-702, 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)).

7-405 TRANSPORTATION CERTIFICATION

(1) No person shall transport to or accept for transport from any location in Vermont any hazardous waste without first obtaining certification from the Secretary.

(2) Any transporter who is required to obtain certification shall complete, sign, and submit an application for certification to the Secretary on the form provided. The application form shall include, but not be limited to, the following information:

(a) The nature of the wastes to be transported;

(b) The anticipated destination of the waste;

(c) The method of transportation; and

(d) Specific information concerning the vehicles to be used.

(3) Each transportation certification shall, at a minimum, require the following actions to be taken by the transporter:

(a) Maintain a current notification of hazardous waste activity as required in Section 7-104;

(b) Obtain an EPA identification number from the Secretary by applying on the Notification of Hazardous Waste Activity form provided;

(c) Maintain a license to transport hazardous waste from the Vermont Agency of Transportation except in the case of new certifications where initial licensing may follow certification;

(d) Maintain liability insurance for sudden accidental occurrences as specified in Section 7-409;

(e) Conduct a personnel training program for all employees handling hazardous

waste as specified in Section 7-408; and

(f) Report annually on the Hazardous Waste Annual Report (Transporters) form provided by the Secretary.

(4) Certification shall be for a period of time not to exceed five years.

7-406 MODIFICATION, SUSPENSION, REVOCATION, OR DENIAL OF CERTIFICATION

(1) The Secretary may modify any transporter certification upon his or her own motion or upon the receipt of a written request for modification which contains facts and reasons supporting the request. If the Secretary determines that modification is appropriate, only the conditions subject to modification are reopened. Cause for modification of a transporter's certification is:

(a) Material alterations to the transporter's activities which occurred after certification of the transporter which justify the application of certification conditions that are different or absent from the existing certification;

(b) The receipt of information concerning the transporter which was not available when the certification was issued; or

(c) The standards or regulations on which the certification was based have been changed by promulgation of amended standards or regulations or by judicial decision after certification was issued;

(2) The Secretary may suspend or revoke any transporter certification or deny any application for transporter certification upon his or her own motion or upon receipt of a written request for suspension, revocation, or denial which contains facts and reasons supporting the request. Cause for suspension, revocation or denial is:

(a) Non-compliance by the transporter with the requirements of 10 V.S.A., Chapter 159, these regulations, the regulations promulgated by the Vermont Agency of Transportation for the transportation of hazardous wastes, or any term or condition of certification, order, or assurance;

(b) Failure by the transporter to disclose all relevant facts during the certification process which were known at that time;

(c) Misrepresentation of any relevant fact at any time;

(d) A felony conviction of the transporter in any jurisdiction when the conviction concerns violations of hazardous waste statutes or regulations; or

(e) A determination by the Secretary that the transporter's activities constitute

a serious threat to human health or the environment and that such threat can only be regulated to acceptable levels by suspension, revocation or denial of certification.

(3) The Secretary shall provide written notice of modification, suspension, revocation, or denial, including the reasons for such actions, to the transporter involved. Any transporter who receives such notification shall have thirty days from the receipt of the notice to submit a written request for a hearing to the Secretary. The Secretary shall then provide a hearing within thirty days of receipt of the request. The submission of a request for a hearing does not stay the effective date of the Secretary's decision.

7-407 ACCEPTING SHIPMENTS OF HAZARDOUS WASTE

A transporter may accept hazardous waste only from the following:

(1) A generator who has an EPA identification number issued by the Secretary;

(2) Another transporter who at the time has a valid transporter certification from the Secretary;

(3) A (bulk shipment) water transporter; or

(4) A rail transporter.

7-408 PERSONNEL TRAINING

Except for hazardous waste transporters who neither pick up waste in Vermont nor deliver waste in Vermont, the following is required:

(1) All vehicle drivers and all employees of a certified transporter who may handle hazardous waste or accompany vehicle drivers during handling or transportation of hazardous waste shall successfully complete a program of instruction that teaches how to perform transportation duties in a way that ensures the transporter's compliance with these regulations and the Vermont Agency of Transportation regulations on the transportation of hazardous waste. Such instruction program, at a minimum, shall include:

(a) Basic knowledge of the Vermont Hazardous Waste Management Regulations and DOT's labeling, packing, placarding and shipping requirements as set forth in 49 CFR parts 171 through 179 and all other applicable DOT regulations;

(b) Safe vehicle operations to avoid creating hazards to public health, safety,

or welfare or the environment;

(c) Handling of hazardous wastes in a safe manner;

(d) Emergency handling procedures in the event of a discharge of hazardous waste during transportation, including containment of hazardous waste to minimize harm to public health, safety, or welfare or the environment in compliance with 49 CFR Sections 177.853 and 174.14, and Section 7-105 of these regulations;

(e) Familiarity with and use of the most recent edition of the Emergency Response Guidebook for Hazardous Materials published by the DOT; and

(f) A method to assure that the instruction program has been successfully completed (e.g. written or oral tests).

(g) Means and methods to effectively communicate with generators, facilities, other transporters, law enforcement and emergency personnel as required.

(2) For each vehicle driver and for each employee of the transporter who may handle hazardous waste or accompany vehicle drivers during handling or transportation of hazardous waste, all records relating to the instruction program pursuant to Section 7-408(1), and all other records, shall be kept on file by the transporter while these individuals are employed by the transporter, and for three (3) years after these individuals cease being employed by the transporter. This period shall be extended automatically for the duration of any unresolved enforcement action, or as ordered by the Secretary. These records shall include the following:

(a) Dates of instruction;

(b) Topics covered; and

(c) Documentation that individuals successfully completed the instruction.

(3) The Secretary may independently verify successful completion of the instruction program pursuant to 7-408(1) by examining trainees, employees, or utilizing other appropriate methods.

7-409 LIABILITY INSURANCE REQUIREMENTS

(1) All certified hazardous waste transporters shall carry liability insurance, as required by U.S. DOT regulations, for sudden and accidental occurrences, exclusive of legal defense costs, for claims arising out of bodily injury and property damage from the hazardous waste transport operations of the transporter. Such insurance policy shall carry an approved DOT endorsement (Form MCS 90 - DOT) covering liability for accidents, including environmental restoration, bodily injury, and

property damage.

(2) The insurance coverage shall include the provision that the insurer notify the Agency at least thirty (30) days before cancellation of the insurance or for reduction in limits below the minimum required in Section 7-409(1).

(3) The insurance policy shall be maintained in full force at all times during the term of the certification.

7-410 EMERGENCY PREPAREDNESS

No transporter shall transport hazardous waste in Vermont without being in possession of the following on each vehicle:

(1) Telephone numbers of:

(a) The generator of the waste being transported;

(b) The Vermont Agency of Natural Resources and the telephone numbers specified in Section 7-105; and

(c) The Chemical Transportation Emergency Center (CHEMTREC).

(2) A copy of the most recent edition of the Emergency Response Guidebook for Hazardous Materials published by DOT.

(3) All of the following equipment in good operating condition:

(a) A first aid kit with eye wash;

(b) An Underwriters' Laboratory listed explosion proof flashlight;

(c) A fire extinguisher of appropriate size and type for the vehicle and wastes carried; and

(d) Personnel protective equipment appropriate for the types of material being transported (e.g. respirator, protective suit, gloves, boots).

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Subchapter 5: REQUIREMENTS FOR HAZARDOUS WASTE TREATMENT, STORAGE, AND DISPOSAL FACILITIES

7-501 Purpose, Scope, Applicability

(1) This subchapter describes the requirements for the design, construction, operation, and maintenance of hazardous waste treatment, storage, and disposal facilities. This subchapter also describes the procedures for certification of hazardous waste facilities.

(2) The requirements of this subchapter apply to owners and operators of hazardous waste facilities including all facilities which treat, store, or dispose of hazardous wastes referred to in Appendix VI.

7-502 Best Control Technology Standards

(1) Every hazardous waste treatment, storage, or disposal facility shall be designed, constructed, operated, and maintained in accordance with the best control technology for such facility.

(2) The Secretary shall determine the best control technology for any particular facility by considering the cost of such technology, its energy requirements, the quantity of waste involved, and the possible adverse effects on health or the environment presented by such waste.

(3) For all major hazardous waste facilities operating under a certification issued under this chapter, the best control technology shall, at a minimum, be the design, construction, operation, and maintenance requirements of:

(a) 40 CFR Part 264, Subparts B through O and X;
(b) 40 CFR Part 266;
(c) The land disposal restrictions of Section 7-106; and
(d) The State of Vermont Environmental Protection Rules, Chapters 1 through 19.

(4) For all major hazardous waste facilities which were in operation or under construction as of July 18, 1980, which have been in operation or under construction since that date, or which are currently operating or under construction without certification, the best control technology shall, at a minimum, be the design, construction, operation and maintenance requirements of:

(a) 40 CFR Part 265, Subparts A through R;
(b) 40 CFR Part 266;
(c) The land disposal restrictions of Section 7-106; and
(d) The State of Vermont Environmental Protection Rules, Chapters 1 through

19.

(5) A major hazardous waste facility is one which handles wastes from generators who are not small quantity generators provided:

(a) Such wastes are regulated as hazardous wastes under 40 CFR Part 261; and

(b) The facility handling the wastes would be subject to the permitting and regulatory requirements of 40 CFR Parts 260 through 270.

7-503 FACILITY CERTIFICATION

(1) No person shall treat, store or dispose of any hazardous waste without first obtaining certification from the Secretary for such facility. Such facilities include, but are not limited to: transfer stations which store for longer than ten days; surface impoundments; incineration; underground storage; storage above ground for more than ninety (90) days; landfilling; landfarming; deep well or dry well injection; discharges to a public or private sewerage or septic system, unless permitted by 10 V.S.A. Chapter 47; and recycling facilities.

(2) No person shall initiate construction of, or make major modification to, a hazardous waste treatment, storage, or disposal facility without first applying for and receiving certification for such facility in accordance with sections 7-506 and 7-507 of these regulations. In addition, any hazardous waste treatment, storage or disposal facility that was in existence on November 19, 1980, or any facility that treats, stores or disposes of a material that has been newly defined or listed as a Vermont or federal hazardous waste, must apply for interim certification in accordance with section 7-510 of these regulations.

(3) Certification shall be for a period not to exceed five (5) years.

(4) Owners and operators of hazardous waste management units must have permits during the active life (including the closure period) of the unit. Owners and operators of landfills, surface impoundments, land treatment units, and waste pile units must have post-closure permits as specified in 40 CFR 270.1(c).

(5) (a) Continuation of Expiring Certificates. If the certificate holder has submitted a timely application for a re-certification and the Secretary, through no fault of the certificate holder, does not issue a new certificate with an effective date prior to the expiration of the previous certificate, the conditions of the expired certificate continue in force until the effective date of a new certificate.

(b) Certificates continued under this section remain fully effective and enforceable.

(c) When the certificate holder is not in compliance with the conditions of the expired or expiring certification, the Secretary may do any or all of the following:

(i) Initiate an enforcement action based on the certificate that has been continued;

(ii) Issue a notice of intent to deny the new request for certification. If the certification is denied, the activities authorized by the continued certificate would have to cease or become subject to an enforcement action;

(iii) Issue a new certification with appropriate conditions; or

(iv) Take other actions authorized by these regulations.

(6) For the purposes of construing 40 CFR Parts 260 through 270, a person who receives certification under this chapter shall also be known as the permittee.

7-504 EXEMPTIONS

The following facilities and activities are exempted from the provisions of this subchapter:

(1) A resource recovery facility managing municipal solid waste provided:

(a) The facility receives and burns only household refuse and solid waste from commercial or industrial sources which does not contain hazardous wastes; and

(b) The 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) A totally enclosed treatment facility. A totally enclosed treatment facility is 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 hazardous waste or any constituent thereof into the environment during treatment.

(3) The owner or operator of an elementary neutralization unit or wastewater treatment unit as defined in 40 CFR Section 260.10.

(4) Any person engaged in treatment or containment activities during an immediate

response to a spill or discharge of a hazardous material and during an imminent and substantial threat of a spill or discharge of hazardous material, provided that the person:

(a) Complies with Section 7-105 on emergency actions;

(b) Complies with 40 CFR Part 264, Subparts C and D; and

(c) Obtains certification under this subchapter when he or she continues or initiates treatment or containment activities after the immediate response is over.

(5) The treatment of hazardous waste by mixing absorbent material with containerized hazardous waste provided:

(a) The mixing occurs when the waste is first placed in the container; and

(b) The person treating the waste complies with 40 CFR 264.17(b), 264.171, and 264.172.

(6) A solid waste management facility certified by the Secretary, if the only hazardous waste the facility treats, stores, or disposes of is excluded from regulation under 40 CFR 261.5.

7-505 EMERGENCY CERTIFICATION

(1) Notwithstanding any other section of these regulations, in the event the Secretary finds an imminent and substantial endangerment to human health or the environment, the Secretary may issue a temporary emergency certification to an uncertified facility to allow the treatment, storage, or disposal of hazardous waste or to a certified facility to allow treatment, storage, or disposal of a hazardous waste not covered by an effective certification.

(2) This emergency certification:

(a) May be oral or written. If oral, it shall be followed in five days by a written emergency certification;

(b) Shall not exceed 90 days in duration;

(c) Shall clearly specify the hazardous wastes to be received, and the manner and location of their treatment, storage, or disposal;

(d) May be terminated by the Secretary at any time without process if he or she determines that termination is appropriate to protect human health and

the environment;

(e) Shall be accompanied by a public notice published including:

(i) Name and address of the office granting the emergency authorization;

(ii) Name and location of the facility;

(iii) A brief description of the waste involved;

(iv) A brief description of the action authorized and reasons for authorizing it; and

(v) The duration of the emergency permit.

(f) Shall incorporate, to the extent possible and not inconsistent with the emergency situation, all applicable requirements of these regulations.

7-506 APPLICATION FOR CERTIFICATION

(1) Any person who is required to obtain certification under Section 7-503 shall complete, sign, and submit an application for certification to the Secretary as described in this section. When a facility is owned by one person but is operated by another person it is the operator's duty to obtain certification except that the owner must also sign the application for certification.

(2) No person shall begin physical construction of a facility without having received certification from the Secretary.

(3) The Secretary shall not begin the processing of a certification until the applicant has fully complied to the Secretary's satisfaction with the specific application requirements for the type of facility involved, unless the only information not submitted is the information required for exposure assessments for surface impoundments or landfills in the Vermont facility application form.

(4) Certain technical data, such as design drawings and specifications and engineering studies which are required to be submitted in an application, shall be certified by a registered professional engineer.

(5) Each application for certification shall be made on the Vermont Application for Facility Certification form provided by the Secretary.

(6) In addition to the requirements of paragraph (5) above, each application for a hazardous waste land treatment or disposal facility shall include, but not be limited to, the following information:

(a) A description of the provisions for hydrogeological studies, monitoring analysis, and protection of ground and surface waters;

(b) A description of the provisions for post-closure monitoring and maintenance of the facility; and

(c) A description of the actions taken by the facility to assure financial responsibility for the post-closure care monitoring period and civil liability arising from non-sudden incidents at the facility.

(7) In addition to the requirements of paragraph (5) above, each applicant for a hazardous waste incinerator shall provide all documentation required by 40 CFR 270.62.

(8) Applicants shall keep records of all data used to complete certification applications and any supplemental information submitted to the Secretary for a period of at least three (3) years from the date the application is signed.

7-507 PROCEDURE FOR CERTIFICATION AND CLASS 3 MODIFICATIONS

(1) Upon completing review of each application for certification under Section 7-506 or Class 3 modification of an existing certification under Section 7-509, the Secretary shall either issue a draft certificate or deny certification. The Secretary shall prepare a written justification for any certification which has been denied and give public notice of the decision to deny.

(2) Each draft and final certificate shall contain:

(a) All standards, conditions, and requirements that the Secretary has determined to be the best control technology for the specific facility involved; and

(b) For major hazardous waste facilities, the Uniform Certification Condition form provided by the Secretary.

(3) The Secretary shall consult with the Commissioner of Health and the Commissioner of Labor and Industry to avoid conflicts of the standards and conditions of any draft certification with requirements which may be imposed under the Vermont Occupational Safety and Health Act or any other applicable state safety or health regulation.

(4) (a) A fact sheet shall be compiled for every draft certificate prepared by the Secretary. The fact sheet shall briefly set forth the significant factual, legal, methodological, and policy questions considered in preparing the draft

certificate. In addition, the fact sheet shall include the information described in 40 CFR 124.8(b).

(b) For preparing a draft certificate, the record shall consist of: the application, if required, and any supporting data furnished by the applicant; the draft certificate or notice of intent to deny the application or to terminate the permit; the fact sheet; all documents cited in the fact sheet; and other documents contained in the supporting file for the draft permit.

(5) Copies of the fact sheet and draft certificate shall be sent to the applicant, the town where the facility is located or proposed to be located in, any other Agency or subdivision thereof which has issued or may be requested to issue a permit for the facility, the U.S. Environmental Protection Agency, and any other appropriate government authorities. Copies of the fact sheet and draft certificate shall also be made available to any other interested party.

(6) The Secretary shall provide notice, by advertisement in major local newspapers of general circulation and broadcast over local radio station of the issuance of each draft certificate for a major hazardous waste facility, the opportunity for public comment on such draft certificate, and of the informational public hearing which shall be held for such draft certificate at least forty-five (45) days prior to such hearing. At a minimum, the public notice and comment requirements of 40 CFR 124.10 must be met.

(7) The Secretary shall provide notice, by advertisement in newspapers of general circulations, of the issuance of each draft certificate for a minor hazardous waste facility and the opportunity for public comment on such draft certificate for at least thirty (30) days following its issuance. An opportunity for an informational public hearing on such draft certificate shall be provided at the end of the thirty (30) day comment period. At a minimum, the public notice and comment requirements of 40 CFR 124.10 must be met.

(8) Prior to the issuance of each final certificate, the Secretary shall consider all comments raised during the public comment period and prepare a response to comments which specifies:

(a) The content of all significant comments;

(b) The Secretary's response to those comments;

(c) Any changes that will be made to the draft certificate; and

(d) The reasons for those changes.

(9) The Secretary may issue a certificate for using field tests or laboratory analyses

for a land treatment demonstration in accordance with 40 CFR 270.63.

(10) An appeal may be taken from a final decision on the issuance or denial of a certificate. Appeals shall be taken to the Waste Facility Panel of the Environmental Board, pursuant to 10 VSA 6104.

7-508 COMPLIANCE SCHEDULES

(1) The certification may, when appropriate, specify a schedule of compliance leading to compliance with the Waste Management Act and these regulations. Any schedules of compliance under this section shall require compliance as soon as possible.

(2) Except as provided in paragraph (4)(b) below, if a certification establishes a schedule of compliance which exceeds one year from the date of issuance of a facility's certification, the schedule shall set forth interim requirements and the dates for their achievement provided:

(a) The time between interim dates shall not exceed one year; or

(b) If the time necessary for completion of any interim requirement is more than one year and is not readily divisible into stages for completion, the certification shall specify interim dates for the submission of reports of progress toward completion of the interim requirements and indicate a projected completion date.

(3) The certification shall be written to require that no later than 14 days following each interim date and the final date of compliance, the owner or operator shall notify the Director in writing, of its compliance or non-compliance with the interim or final requirements.

(4) A facility may cease conducting regulated activities (by receiving a terminal volume of hazardous waste) and for treatment and storage facilities, closing and conducting post-closure care pursuant to applicable requirements, rather than continue to operate and meet certification requirements as follows. If the facility decides to cease conducting regulated activities at a given time within the term of a certification which has already been issued:

(a) The certification may be modified to contain a new or additional schedule leading to timely cessation of activities; or

(b) The facility shall cease conducting certified activities before non-compliance with any interim or final compliance schedule requirement already specified in the certification.

(5) If the decision to cease conducting regulated activities is made before issuance of

a certification whose term will include the termination date, the certification shall contain a schedule leading to termination which will ensure timely compliance with applicable requirements.

(6) If the facility is undecided whether to cease conducting regulated activities, the Secretary may issue or modify a certification to contain two schedules as follows:

(a) Both schedules shall contain an identical interim deadline requiring 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;

(b) One schedule shall lead to timely compliance with applicable requirements;

(c) The second schedule shall lead to cessation of regulated activities by a date which will ensure timely compliance with applicable requirements;

(d) Each certification containing two schedules shall include a requirement that after the facility has made a final decision under paragraph (6)(a) 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.

(7) The facility's decision to cease conducting regulated activities shall be evidenced by a firm public commitment satisfactory to the Secretary, such as a resolution of the board of directors of a corporation.

7-509 MODIFICATION, REVOCATION, OR DENIAL OF CERTIFICATION

(1) The Secretary may modify any certification of a hazardous waste treatment, storage, or disposal facility upon his or her own motion or upon a written request for modification which contains facts or reasons supporting the request. When the standards or regulations on which the certification was based have been changed by statute, through promulgation of new or amended standards or regulations, or by judicial decision after the certification was issued, such changes, amendments and decisions are causes for modification. Other causes for modification are specified in 40 CFR 270.41(a). If the Secretary determines that modification is appropriate, only the conditions subject to modification are reopened. All modifications sought on the motion of the Secretary shall be Class 3 modifications and shall be performed in accordance with the procedures and requirements of Section 7-507. The holder of a certificate may request a modification of the appropriate class as designated by Appendix X. The holder of a certificate may request that a Class 1 modification follow the procedures of a Class 2

modification, or that a Class 2 modification follow the procedures of a Class 3 modification. Upon review of a request for a Class 1 or 2 modification, the Secretary may determine that a Class 1 modification request must follow the procedures for a Class 2 modification, or that a Class 2 modification must follow the procedures for a Class 3 modification, because either (1) there is significant public concern about the proposed modification, or (2) the complex nature of the modification requires the more extensive procedures of Class 2 or Class 3.

(2) (a) Class 1 modifications are minor, routine modifications that may be implemented, except where otherwise noted in Appendix X, without prior notification being given to the Secretary. Notification of such modifications must be given to the Secretary by certified mail or other means which establish proof of delivery within seven (7) calendar days after the change is put into effect. Class 1 modifications must be implemented in accordance with the procedures and requirements of 40 CFR 270.42(a). Appendix X specifies which Class 1 modifications require prior notification to the Secretary.

(b) Class 2 modifications are frequently occurring modifications that become necessary due to variations in types and quantities of wastes managed, technological advancements, regulatory changes, and similar circumstances as designated in Appendix X. The holder of a certificate shall submit a modification request to the Secretary that:

(i) Describes the exact change to be made to the certification conditions and supporting documents referenced by the certificate;

(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 40 CFR sections 270.13 through 270.21, 270.23, 270.62, and 270.63.

A Class 2 modification must be made in accordance with the procedures and requirements of 40 CFR 270.42(b).

(c) Class 3 modifications are substantial modifications to the actual physical plant and equipment or operating processes, or otherwise significantly affect the certification conditions. Appendix X designates which changes are Class 3 modifications. The holder of a certificate must submit a modification request to the Secretary that:

(i) Describes the exact change to be made to the certification conditions and supporting documents referenced by the certificate;

(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 sections 270.13 through 270.21, 270.23, 270.62, and 270.63.

A Class 3 modification must be made in accordance with the procedures and requirements of 40 CFR sections 270.42(c)(1) - (5), with a decision being made in accordance with the procedures and requirements of section 7-507 of this chapter.

(3) Modifications not specifically listed in Appendix X are Class 3 modifications. The holder of a certificate may request a determination by the Secretary that a modification not listed be reviewed and approved as a Class 1 or Class 2 modification. In determining the appropriate class of a modification not listed in Appendix X, the Secretary shall consider the similarities of the modification requested to other modifications listed in Appendix X, and described by 7-509(2)(a) and (b).

(4) Upon the request of a certificate holder, the Secretary may, without prior public notice and comment, grant the holder of a certificate a temporary authorization in accordance with 40 CFR 270.42(e).

(5) The holder of a certificate is authorized to continue to manage wastes that have become newly listed or identified as hazardous under Subchapter 2 of these regulations if he or she meets the requirements of 40 CFR 270.42(g). New wastes or units added to a facility's permit under this section do not constitute expansions for the purpose of the 25 percent capacity expansion limit for Class 2 modifications.

(6) The Secretary shall notify persons on the facility mailing list and appropriate units of State and local government within 10 days of any decision to grant or deny a Class 2 or Class 3 request for modification of certification. The Secretary shall also notify such persons within 10 days after an automatic authorization for a Class 2 modification goes into effect under 40 CFR 270.42(b)(6)(iii) or (v).

(7) The Secretary may revoke or deny any certification, or deny any request for modification, for a hazardous waste treatment, storage, or disposal facility upon his or her own motion or upon a written request which contains facts or reasons supporting the request. Cause for suspension or revocation is:

(a) Non-compliance by the facility with the requirements of 10 V.S.A. Chapter 159, these regulations, any order issued under 10 V.S.A. 6610a, or any

condition of certification;

(b) Failure by the facility to disclose all relevant facts during the certification process which were known at that time;

(c) Misrepresentation of any relevant fact at any time; or

(d) A determination by the Secretary that the facility's activities endanger human health or the environment and can only be regulated to acceptable levels by revocation of certification.

(8) Any revocation or denial of certification by the Secretary shall be performed in accordance with the procedures and requirements of Section 7-507.

(9) The Secretary may, pursuant to the procedures of this subchapter, deny an application for certification either in its entirety or as to the active life of a hazardous waste management facility or unit only.

(10) An appeal may be taken from a final decision on the approval or denial of a request for the modification of a certificate. Appeals shall be taken to the Waste Facility Panel of the Environmental Board, pursuant to 10 VSA 6104.

7-510 INTERIM STATUS CERTIFICATION

(1) The purpose of this section is to establish minimum 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.

(2) The standards of 40 CFR Part 265 and this section 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 40 CFR 270.10 until either certification is made under this subchapter 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 an application for certification as required by subsections (5) and (6) of this section. 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 in otherwise in this subchapter or Subchapter 2.

(3) The following hazardous wastes must not be managed at facilities subject to regulation under this section: EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, or F027.

(4) The requirements of this section apply to owners and operators of all facilities which treat, store or dispose of hazardous waste referred to in 7-106.

(5) Owners and operators of hazardous waste management facilities in existence on November 19, 1980 must submit an application for certification or interim certification as required by 40 CFR 270.10(e).

(6) (a) If any owner or operator of a hazardous waste management facility has filed for interim status certification and has not yet filed for certification, the owner or operator shall file an amended interim status application:

(i) With the Secretary no later than the effective date of regulatory provisions listing or designating wastes as hazardous in the state in addition to those already listed or designated hazardous by the Agency, if the facility is treating, storing or disposing of any of those newly listed or designated wastes; or

(ii) As necessary to comply with provisions of 40 CFR 270.72 for changes during interim status.

(b) The owner or operator of a facility who fails to comply with the updating requirements of this section does not receive interim status as to the wastes not covered by a duly filed interim status application.

(7) Any person applying for interim certification under this section shall use the Application for Interim Certification provided by the Secretary.

(8) In order for a facility to qualify for interim status, the owner or operator must submit a Notification of Hazardous Waste Activity form, an Application for Interim Certification, and otherwise meet the requirements of 40 CFR 270.70 - 270.73.

7-511 SPECIAL CERTIFICATION

(1) Research, Development, and Demonstration Certification

The Secretary may issue a research, development, and demonstration certificate for any hazardous waste treatment facility which proposes to utilize an innovative and experimental hazardous waste treatment technology or process for which certification standards for such experimental activity have not been promulgated under 40 CFR Part 264 or 266. Any such certificate shall include such terms and conditions as will assure protection of human health and the environment. Such certificates shall meet the requirements of 40 CFR 270.65.

7-512 NOTICE OF INTENT

(1) Any person required to file for a certificate of need under section 7-513 shall first submit a notice of intent. The notice of intent shall be filed at least 30 days prior to filing the application for the certificate of need. The applicant shall file a notice of intent with the proposed host municipality, abutting municipalities, and the secretary.

(2) The notice of intent shall include:

(a) A detailed description of the proposed facility and location, including architectural drawings;
(b) A description of the treatment or disposal processes to be employed;
(c) The amount and types of hazardous wastes to be handled;
(d) Alternative sites and technologies that were considered;
(e) Reasons for choosing the proposed location and technologies, including any proposals to negotiate with, or the results of negotiations with, the proposed host municipality; and
(f) An explanation of how the facility conforms to any applicable provisions of the hazardous waste management plan adopted by the secretary.

(3) The applicant shall publish a notice of the notice of intent within 7 days of receipt in a newspaper of general circulation in the county in which the proposed facility will be located.

7-513 CERTIFICATE OF NEED

(1) Applicability

(a) Except as provided for in subsection (b), no person shall begin site preparation for or construction of a hazardous waste management facility for the purpose of treatment or disposal of hazardous waste, without first obtaining a certificate of need.

(b) This section shall not apply to:

(i) The replacement of an existing facility at the original site with an equivalent facility in the usual course of business; or

(ii) A hazardous waste management facility that is operated only by or on behalf of the owner of the facility for the treatment or disposal of hazardous waste generated in Vermont by the owner of the facility. Such facility shall be located on a site of generation.

(2) Documents for Submission

The following documents shall be submitted to initiate the certificate of need review process:

(a) Application for certificate of need; and

(b) A copy of any agreement reached in negotiations between the proposed host municipality and the applicant.

(3) Application for Certificate of Need

(a) An application for a certificate of need shall not be considered complete until at least 30 days after the filing of the notice of intent.

(b) Three (3) copies of the application shall be submitted to the Secretary.

(c) The application for the certificate of need shall contain:

(i) A legal description of the owner and the operator of the proposed facility, and of the facility site;

(ii) Documentation of past or current ownership, past or current participation in a partnership, or past or current participation in a corporation as a director or officer in any other hazardous waste facility;

(iii) A description of the financial mechanisms adequate to meet all applicable liability insurance requirements;

(iv) If a hazardous waste management plan has been adopted by the secretary, a demonstration that evaluates the facility's consistency with the hazardous waste management plan;

(v) Evidence sufficient to indicate that the proposed facility location is suitable for the type and amount of hazardous waste intended for treatment or disposal at the facility, including:

(A) Identification of each type and amount of waste to be handled at the facility;

(B) A detailed description of all proposed processes and technologies to be utilized by the facility;

(C) The maximum capacity of the proposed facility for each waste stream;

(D) The extent to which the proposed facility fulfills the requirements of any interstate agreement or regional compacts;

(E) An evaluation of the feasibility of alternative methods to treatment or disposal (e.g. source reduction, recycling); and

(F) An evaluation of alternative treatment or disposal technologies to handle the types and amounts of hazardous waste anticipated to be handled at the proposed facility.

(vi) Evidence sufficient to indicate that the proposed facility location is accessible by transportation routes that minimize the threat to public health and safety and to the environment, including, at a minimum:

(A) A description of the anticipated transportation methods to be used to transport hazardous materials to the proposed facility;

(B) An analysis of the risks to public health and safety and to the environment involved in the anticipated transportation methods;

(C) A description of the anticipated routes including primary and secondary road systems, railways, and waterways; and

(D) An analysis of the risks to public health and safety and to the environment involved in the anticipated routes to the proposed facility.

(vii) Evidence sufficient to indicate that the proposed facility location reasonably accommodates the plans and preferences of the proposed host municipality, including, at a minimum:

(A) Any letter of intent or agreement between the proposed facility developer and the host municipality;

(B) Any communication from the host municipality indicating a position on a proposed site;

(C) A copy of the host municipality's zoning regulations, town plans, subdivision bylaws, and other relevant planning documents, indicating which provisions are applicable.

(viii) An evaluation of the proposed facility location that includes:

(A) Reasons for choosing the proposed facility location;

(B) The proximity of the proposed facility to schools, hospitals, commercial developments, airports, churches, nursing homes, prisons, subdivisions, houses, and other structures that fall within a 1 mile radius;

(C) A description of and the proximity to emergency response services.

(4) Duties of the Secretary

(a) Before the secretary may review an application for a certificate of need, the secretary must find the application to be complete. No application shall be considered complete unless it contains, at a minimum, the information specified in section 7-513(3)(c), and unless it was preceded by at least 30 days by a notice of intent. The secretary shall notify the applicant within 45 days of receipt of the application whether the application is complete. If an application is determined to be incomplete, the applicant may resubmit a new or amended application.

(b) The secretary shall hold at least one public hearing on the application for the certificate of need on the proposed facility within 60 days after a determination that the application is complete. The applicant shall attend the hearing(s).

(c) The secretary shall give notice of the public hearing not less than 30 days prior to the hearing.

(i) Notice shall be given to the following parties:

(A) Department of Health;
(B) Historic Preservation Division;
(C) State Planning Office; and
(D) Agency of Transportation.

(ii) Notification by certified mail is required for:

(A) Adjoining landowners;
(B) Legislative body of the proposed host municipality; and
(C) Chairs and directors of the municipal and regional planning commissions.

(d) Notice of the public hearing shall be published once weekly for two consecutive weeks in a newspaper of general circulation in the county in which the proposed facility will be located, with the last publication at least 12 days before the day of the hearing.

(e) The secretary shall issue a decision on the certificate of need within 90 days of the final public hearing with written findings of fact and conclusions of law upon which the decision is based.

(f) The secretary shall issue or deny a certificate of need. The secretary shall only issue a certificate of need if the secretary concludes that the facility is needed for the general good of the state and with the approval of the governor.

(5) Review Criteria

To determine that a proposed facility is needed for the general good of the state, the secretary must find that:

(a) The proposed facility is consistent with any applicable provisions of the state hazardous waste management plan, if such plan has been adopted by the secretary, or, if such plan has not been adopted by the secretary, the proposed facility is consistent with the general goals and priorities of Chapter 159 of Title 10 as determined by the secretary;

(b) The proposed facility location:

(i) Is suitable for the type and amount of hazardous waste intended for treatment or disposal at the facility;

(ii) Is accessible by transportation routes that minimize the threat to the public health and safety and to the environment; and

(iii) Reasonably accommodates the plans and preferences of the proposed host municipality, as expressed by local government entities; and

(c) The need for the facility is demonstrated by the need to assure the environmentally sound treatment or disposal of hazardous waste generated within Vermont as identified by the state hazardous waste management plan; and

(i) The further need to meet Vermont's obligations under an interstate agreement or regional compact; or

(ii) The lack of adequate current or projected treatment or disposal capacity within the region to handle the hazardous waste generated by Vermont generators which is proposed for the facility.

(6) Conditions in the Certificate

(a) If the secretary determines that the certificate of need should issue, the secretary shall establish conditions which:

(i) Limit the capacity of the hazardous waste facility to the reasonably anticipated needs and interstate commitments of the state for hazardous waste management; and

(ii) Restrict the facility from accepting hazardous wastes from generators who have not demonstrated an effective hazardous waste source reduction program.

(b) The conditions established by the secretary shall only allow a facility to accept waste from generators who have submitted the following signed certification:

"I certify under penalty of law that this facility has in place an effective hazardous waste source reduction program that was 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 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."

(c) The certification shall be signed and completed in accordance with Section 7-108(1).

(7) Modification to Capacity

(a) Upon application by the holder of the certificate of need, the conditions in the certificate of need may later be adjusted by the secretary if the limits on capacity are found to prevent profitable operation of the facility. The secretary may consider, but is not limited to considering, the following factors in determining whether an increase in capacity would ensure profitable operation of the facility:

(i) Current capacity limitations;

(ii) An estimate of the increase in capacity needed to maintain profitable operations;

(iii) Current market prices for waste disposed at the facility and a

statement showing fluctuations over the past 3 years, including market prices at the time of issuance of the certificate of need;

(iv) A balance sheet for the past 3 years or since the issuance of the certificate of need, whichever is greater;

(v) Profit margins of similar facilities treating or disposing of similar wastes streams; and

(vi) New types of waste streams which could be accepted, taking into account all applicable existing and proposed regulations, all in-state generation needs and all interstate agreements and regional compacts.

(b) Should a holder of a certificate of need apply to increase the capacity limitations of an existing facility for any reason other than to maintain a profitable operation, the applicant shall apply to the secretary for a new certificate of need.

(8) Appeals

Appeals from a determination of the secretary regarding the certificate of need shall be to the waste facility panel under 10 V.S.A. 6103a.

7-514 FEES

Any fee set by rule or statute shall be submitted along with an application for a certificate of need under this subchapter.

Subchapter 6: STANDARDS FOR HAZARDOUS WASTES THAT ARE RECYCLED

7-601 Purpose, Scope, Applicability

(1) This subchapter defines the management standards for hazardous wastes that are recycled. Hazardous wastes that are recycled will be known as "recyclable materials".

(2) Except for wastes and activities specified in this subchapter:

(a) Generators and transporters of recyclable materials are subject to all applicable requirements of this chapter for generators and transporters;

(b) Owners or operators of facilities that store recyclable materials before they are recycled are regulated under all applicable provisions of subchapters 1, 5 and 7.

(c) Owners or operators of facilities that recycle recyclable materials without storing them before they are recycled are subject to the notification requirements in Section 7-104, manifest requirements in Section 7-704, and recordkeeping requirements in Section 7-804(2).

(d) Generators of recyclable materials who recycle these materials shall manage them as hazardous wastes until the recycling process is complete.

(e) Residuals from the processing of recyclable materials shall be managed as hazardous wastes in accordance with this chapter.

(3) Recyclable materials that are treated at a facility without being recycled on that site are subject to the requirements in subchapter 5.

7-602 Definition of Recycled

A material is recycled if it is:

(1) Used or reused by either being

(a) 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

(b) Employed in a particular function or application as an effective substitute for a commercial product (for example, spent pickle liquor used as

phosphorus precipitant and sludge conditioner in wastewater treatment); or

(2) Reclaimed by being processed to recover a usable product or if it is regenerated.

7-603 EXEMPTIONS

The following are not subject to regulation under this chapter:

(1) Scrap metal that is recycled; and

(2) Used batteries (or used battery cells) returned to a battery manufacturer for regeneration, except lead acid batteries, which shall be managed as specified in Section 7-612.

7-604 PROHIBITIONS

(1) The following use or reuse is prohibited:

(a) Any hazardous waste or waste oil, including waste crankcase and automotive oil, used for road oiling and dust suppression; and

(b) Any hazardous waste or waste oil, including waste crankcase and automotive oil, burned for energy recovery in food product processing.

(2) No person shall cause any waste oil (including waste crankcase and automotive oil) subject to this chapter to be transported for commercial purposes by a person without transporter certification.

(3) The burning of waste oils for firefighter training.

7-605 HAZARDOUS WASTES (OTHER THAN WASTE OIL) BURNED FOR ENERGY RECOVERY

(1) Hazardous waste (other than waste oil) that is burned for energy recovery in any boiler, industrial furnace, or cement kiln, unless the boiler, industrial furnace or cement kiln is an incinerator subject to the certification requirements under subchapter 5, shall be managed in accordance with 40 CFR Sections 266.30 through 266.35.

(2) The person in control of any hazardous waste subject to this section shall comply with all applicable provisions of the Vermont Air Pollution Control Regulations.

7-606 WASTE OIL BURNED FOR ENERGY RECOVERY

Waste oil burned for energy recovery is subject to all applicable provisions of the Vermont Air Pollution Control Regulations and the following:

(1) Sections 7-606 through 7-610 apply to any waste oil, including waste crankcase and automotive oil, that is burned for energy recovery in any boiler, oil-fired space heater, or industrial furnace that is not an incinerator subject to the certification requirements under Subchapter 5. Such waste is termed "waste oil fuel" and includes any fuel produced from waste oil by processing, blending, or other treatment.

(2) Except as provided in paragraph (3) of this section, waste oil that is mixed with hazardous waste and burned for energy recovery is subject to regulation as hazardous waste fuel under Section 7-605. Waste oil containing more than 1000 part per million (ppm) of total halogens is presumed to be mixed with a halogenated hazardous waste listed in Subchapter 2 and is subject to requirements of Section 7-605. Persons may rebut this presumption by demonstrating that the waste oil does not contain hazardous waste (for example, by showing that the waste oil does not contain significant concentrations of halogenated hazardous constituents listed in Appendix II of this chapter).

(3) Waste oil burned for energy recovery and any fuel produced from waste oil by processing, blending, or other treatment is subject to regulation under Sections 7-606 through 7-610 rather than Section 7-605 if it is a hazardous waste solely because it:

(a) Exhibits a characteristic of hazardous waste identified in Sections 7-204 through 7-207 and is not mixed with any other listed hazardous waste; or

(b) Contains hazardous waste generated only by a person who generates hazardous waste below the exclusion levels in section 7-303.

(4) Waste oil fuel that exceeds any specification level in Table 1 below is termed "off specification waste oil fuel".

Table 1 - Waste Oil Specifications

Constituent/property	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	4000 ppm maximum

7-607 RESTRICTIONS ON THE BURNING OF WASTE OIL FOR ENERGY RECOVERY

(1) Any person may market off-specification waste oil for energy recovery only to:

(a) Burners or other marketers who have notified the Secretary of their waste oil management activities under Section 7-104 and who have an EPA identification number; and

(b) Burners who burn the waste oil in an industrial furnace or boiler identified in paragraph (2) of this section.

(2) Off-specification waste oil may be burned for energy recovery in only the following devices unless further limited by the Vermont Air Pollution Control Regulations:

(a) Industrial furnaces as defined in section 7-103;

(b) Boilers, as defined in section 7-103 that are identified as follows:

(i) Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transferred into new products, including the component parts of products, by mechanical or chemical processes;

(ii) Utility boilers used to produce electric power, steam or heated or cooled air or other gases or fluids for sale; or

(iii) Waste oil-fired space heaters provided that:

(A) The heater burns only waste oil that the owner or operator generates or waste oil received from do-it-yourself oil changers who generate waste oil as household refuse;

(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.

7-608 REQUIREMENTS APPLICABLE TO GENERATORS OF WASTE OIL BURNED FOR ENERGY RECOVERY

(1) Shipments of waste oils destined for energy recovery by the generator to any collector, marketer, or burner are exempt from the manifest requirements in Section 7-702.

(2) Generators who market waste oil directly to a burner are subject to Section 7-609.

(3) Generators who burn waste oil are subject to Section 7-610.

7-609 REQUIREMENTS APPLICABLE TO MARKETERS OF WASTE OIL BURNED FOR ENERGY RECOVERY

(1) Persons who market waste oil fuel directly to burners are termed "marketers" and include generators who market waste oil fuel directly to a burner, persons who receive waste oil from generators and produce, process, or blend waste oil fuel from those waste oils (including persons sending blended or processed used oil to brokers or other intermediaries) and persons who distribute but do not process or blend waste oil fuel.

(2) The first marketer shall obtain analyses for the parameters of Section 7-606 of all the batches of waste oil to be shipped to other marketers or burners.

(3) A marketer shall obtain an EPA identification number and submit a notification or renotification in accordance with Section 7-104 before initiating any waste oil management activities.

(4) A marketer that initiates a shipment of off-specification waste oil must prepare and send the receiving facility an invoice containing the following information:

(a) An invoice number;

(b) His or her own EPA identification number and the EPA identification number of the receiving facility;

(c) The names and addresses of the shipping and receiving facilities;

(d) The quantity of off-specification oil to be delivered;

(e) The date(s) of shipment or delivery;

(f) The following statement: "This used oil is subject to EPA regulation under 40 CFR Part 266."

(5) Before a marketer initiates the first shipment of off-specification waste oil to a burner or other marketer, the marketer must obtain a one-time written and signed notice from the burner or marketer certifying that:

(a) The burner or marketer has notified the Secretary stating the location and general description of their waste oil management activities; and

(b) If the recipient is a burner, the burner will burn the off-specification waste oil only in an industrial furnace or boiler identified in Section 7-607(2).

(6) Before a marketer accepts the first shipment of off-specification waste oil from another marketer subject to the requirements of this section, the marketer shall provide the marketer with a one-time written and signed notice certifying that the Secretary has been notified of the marketer's waste oil management activities.

(7) All marketers must maintain the following records for a minimum of three years:

(a) Copies of any analyses of waste oil required in paragraph (2) of this section;

(b) An operating log for all shipments of waste oil with the following information:

(i) The name and address of the facility receiving the shipment;

(ii) The quantity of waste oil fuel delivered;

(iii) The date of shipment or delivery; and

(iv) An indication of whether the oil is specification or off-specification and values for the parameters in Table 1 as required under paragraph (2) of this section, if applicable;

(c) All invoices received or initiated under the requirements of paragraph (4) of this section; and

(d) A copy of each certification notice that the marketer sends or receives for three years from the date the marketer last engages in an off-specification waste oil fuel marketing transaction with the person who sends or receives the certification notice.

(8) All marketers shall submit an annual report to the Secretary on or before March 31 of each year for the previous calendar year, with all of the information in paragraph (7)(b) of this Section.

7-610 REQUIREMENTS APPLICABLE TO BURNERS OF WASTE OIL BURNED FOR ENERGY RECOVERY

Owners and operators of facilities that burn used oil fuel are "burners" and shall comply with all applicable provisions of the Vermont Air Pollution Control Regulations and the following:

(1) Before a burner accepts the first shipment of off-specification waste oil fuel from

a marketer, the burner must provide the marketer a one-time written and signed notice certifying that:

(a) The burner has notified or renotified the Secretary of his or her waste oil activities in accordance with Section 7-104(2).

(b) The burner will burn the waste oil only in an industrial furnace or boiler identified in Section 7-607.

(2) Waste oil fuel burned by the generator shall be analyzed for the parameters in Table 1 and a determination made as to whether the oil is specification or off-specification.

(3) Burners who process, blend or otherwise treat waste oil to meet the specification in Section 7-606(4) must obtain documentation through chemical analysis that the waste oil meets specification.

(4) A burner subject to this section must keep the following records for a minimum of three years:

(a) A copy of each invoice received under the requirements of Section 7-609(4);

(b) Analyses of waste oil fuel as may be required under subsections (2) and (3) of this section; and

(c) A copy of each certification notice that the burner sends to a marketer for three years from the date the burner last receives off-specification used oil from that marketer.

7-611 RECYCLE/REUSE EXEMPTIONS FOR RECYCLABLE HAZARDOUS WASTES AND/OR RECYCLING ACTIVITIES

(1) The Secretary may, on a case by case basis, exempt from part or all of the regulations, a waste generated by a particular generator, transported by a particular transporter, or treated or stored by a particular facility if the waste is legitimately recycled provided that:

(a) The recycled material is either:

(i) a Vermont regulated waste with the Waste Code of VT01 - VT13 as described in 7-207 and 7-210 of this chapter; or

(ii) a recycled material described by 40 CFR 260.30.

(b) The procedural and durational requirements and the criteria and standards

used by the secretary in exempting waste under this section shall be no less stringent than those specified in 40 CFR sections 260.30, 260.31, and 260.33;

(c) The standards and requirements which apply to these wastes can be no less stringent than those outlined in 40 CFR 261.6(a) and Part 266, if the waste in question is one addressed by these sections of 40 CFR; and

(d) The recycling, reclamation or reuse of the waste does not present an actual or potential threat to human health or the environment.

(2) The secretary may, on a case-by-case basis, grant a variance from classification as a boiler. The standards and criteria used for this variance and the procedures followed can be no less stringent than those specified in 40 CFR 260.32 and 260.33.

(3) Any person seeking an exemption under this section shall apply on the Recycle and Reuse form provided by the Secretary.

(4) Any generator or facility whose waste is exempted under this Section shall comply with those additional management standards and requirements that the Secretary, after an examination of the factors listed in Section 7-215(3), deems to be necessary to protect human health and the environment.

7-612 SPENT LEAD ACID BATTERIES THAT ARE RECLAIMED

Spent lead-acid batteries that are reclaimed are subject only to the following requirements:

(1) Any generators, dealers, or collectors who store spent lead-acid batteries shall store the batteries under cover on an impervious surface;

(2) Transport of spent lead-acid batteries shall be done in compliance with 49 CFR Parts 171 through 177.

(3) Owners or operators of facilities which store lead-acid batteries before reclaiming them are subject to the requirements of 40 CFR Part 266, Subpart G.

7-613 RECYCLABLE MATERIALS UTILIZED FOR PRECIOUS METALS RECOVERY

(1) The regulations of this section apply to recyclable materials that are reclaimed to recover economically significant amounts of gold, silver, platinum, palladium, iridium, osmium, rhodium, ruthenium, or any combination of these.

(2) Persons who generate, transport, store or recycle recyclable materials that are regulated under this section shall comply with 40 CFR Part 266, Subpart F.

(3) Any generator or facility accumulating or storing recyclable materials from which precious metals are reclaimed shall comply with any additional standards and requirements specified by the Secretary as necessary to protect human health and the environment. In making such determination, the Secretary shall use the standards and procedures specified in 40 CFR Sections 260.40 and 260.41.

7-614 RECYCLABLE MATERIALS USED IN A MANNER CONSTITUTING DISPOSAL

Any recyclable materials that are applied to or placed on the land before or after mixing or combination with any other substance(s) shall be managed in accordance with 40 CFR Sections 266.20 through 266.23. These materials are referred to as "materials used in a manner that constitutes disposal."

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Subchapter 7: MANIFEST REQUIREMENTS

7-701 Purpose, Scope, Applicability

(1) This subchapter establishes requirements for the use of manifests by hazardous waste generators, transporters, and treatment, storage and disposal facilities to track the movement of hazardous waste from the point of generation to any intermediate points and finally to its ultimate point of disposition. This subchapter also establishes requirements applicable to primary exporters and transporters transporting hazardous waste for export.

(2) Unless otherwise specified in this chapter, all generators, transporters, treatment, storage and disposal facilities and facilities that recycle hazardous wastes shall utilize the Vermont Uniform Hazardous Waste Manifest and comply with the instructions contained on or with the forms for all shipments of hazardous waste made or received.

7-702 Manifest Requirements for Generators

(1) Each generator who is not a small quantity generator who transports or offers for transport hazardous waste for treatment, storage or disposal off-site shall:

(a) Use the Vermont Uniform Hazardous Waste Manifest for each shipment of waste, except for those shipments of waste made to facilities located in states which require the use of that state's manifest for shipment of waste to facilities located in that state.

(b) Designate on the manifest one facility which is permitted to handle the waste described on the manifest.

(c) As an option, also designate on the manifest one alternate facility which is permitted to handle his or her waste in the event an emergency prevents delivery of the waste to the primary designated facility.

(d) Obtain the initial transporter's name, signature, and date of acceptance on the manifest. Give the manifest to the transporter after retaining and mailing copies as described below.

(e) Retain a signed copy for at least three (3) years from the date of initial shipment or until receipt of a completed copy. A completed copy of the manifest must be retained as a record for at least three years from the date the waste was accepted by the initial transporter.

(f) Immediately send a copy to the Secretary.

(g) Immediately send a copy to the appropriate state or federal authority for the state where the designated facility is located.

(h) 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.

(i) 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:

(i) The next non-rail transporter; if any; or

(ii) The designated facility if transported solely by rail; or

(iii) The last rail transporter to handle the waste in the United States if exported by rail.

(j) If the transporter is unable to deliver the hazardous waste to the designated facility or the alternate facility, the generator must immediately either designate another facility or instruct the transporter to return the waste.

(k) Wait for confirmation of the shipment by the return of a completed copy of the manifest from the designated facility. All completed copies not returned by the facility within 35 days, or not returned by the foreign consignee within 60 days of the initial shipment must be investigated and reported as provided in Section 7-707.

(l) For all manifested shipments of hazardous waste made to facilities located in other states, it shall be the responsibility of the generator to confirm delivery of the shipment by assuring that the facility return a completed copy to the Secretary.

(2) The requirements of this section do not apply to hazardous waste produced by generators of greater than 220 pounds (100 kilograms) but less than 2200 pounds (1000 kilograms) in a calendar month where:

(a) 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;

(b) The generator maintains a copy of the reclamation agreement in his or her files for a period of at least three (3) years after termination or expiration of the agreement; and

(c) A recycle/reuse exemption under Section 7-611 has been issued by the Secretary, and all conditions of this exemption are complied with.

7-703 MANIFEST REQUIREMENTS FOR TRANSPORTERS

(1) Each transporter of a shipment of hazardous waste for which a manifest is required is prohibited from accepting hazardous waste for shipment unless the transporter does the following:

(a) Prior to accepting the shipment, check for any discrepancies between the manifest and the wastes actually offered for shipment. A transporter shall not accept a shipment if discrepancies exist.

(b) Sign and date the manifest and return a signed copy to the generator before leaving the site with the hazardous waste shipment;

(c) Ensure that the manifest accompanies the waste shipment at all times;

(d) Deliver the entire quantity of waste accepted for transport and the manifest to the next designated transporter, designated facility or foreign consignee; or to the alternate designated facility if the hazardous waste cannot be delivered to the designated facility because an emergency prevents delivery. If the hazardous waste cannot be delivered, the shipment must be returned to the generator immediately or the transporter must contact the generator for further directions and must revise the manifest according to the generator's instructions before resuming transport of the hazardous waste. If no instructions are received from the generator, the transporter shall return all the hazardous waste to the generator.

(e) Obtain the date of delivery and the signature of the continuing transporter or the owner or operator of the designated facility after such person has had an opportunity to inspect the shipment for discrepancies; and

(f) Retain one copy of the manifest in accordance with Section 7-804 and give the remaining copies of the manifest to the accepting transporter or designated facility.

(2) A transporter transporting hazardous waste from a generator who generates greater than 220 pounds (100 kilograms) but less than 2200 pounds (1000 kilograms) of

hazardous waste in a calendar month need not comply with the requirements of Section 7-703 when:

(a) The waste is being transported pursuant to a reclamation agreement as provided in Section 7-702(2).

(b) The transporter records on a log or shipping paper, the following information for each shipment:

(i) The name, address and 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;

(c) The transporter carries this record when transporting this waste to the reclamation facility;

(d) The transporter retains these records for a period of at least three (3) years after termination or expiration of the agreement; and

(e) A recycle/reuse exemption, under Section 7-611, has been issued by the Secretary, and all conditions of this exemption are complied with.

(3) A water (bulk shipment) transporter need not comply with Section 7-703(1)(c), (e) and (f) provided the transporter complies with 40 CFR Section 263.20(e). Any person utilizing this exemption need not comply with Section 7-804(2), (3) and (5).

(4) For shipments involving rail transportation, the requirements of Section 7-703(1)(c), (e) and (f) do not apply provided the shipment complies with 40 CFR Section 263.20(f). Any person utilizing this exemption need not comply with Section 7-804(2), (3) and (5).

7-704 MANIFEST REQUIREMENTS FOR HAZARDOUS WASTE FACILITIES

Each owner or operator of a certified hazardous waste treatment, storage or disposal facility or any facility recycling hazardous waste who accepts a shipment of hazardous waste for which a manifest is required shall comply with the following:

(1) Perform an inspection upon receipt of each shipment of hazardous waste, comparing the description appearing on the manifest and the waste actually received, noting any significant discrepancies, as defined in subsection (8) below, on the manifest in the space provided. Any significant discrepancies shall be

immediately reported to the Secretary as provided by Section 7-804(5);

(2) Sign and date each copy of the manifest to certify that the hazardous waste covered by the manifest was received and give a completed copy to the transporter;

(3) Immediately send the manifest original to the appropriate state or federal authority for the state where the waste was generated;

(4) Immediately send the appropriate completed copy to the appropriate state or federal authority for the state where the facility is located;

(5) Send the appropriate completed copy of the manifest to the generator of the waste within thirty (30) days of the date of initial shipment; and

(6) Retain a copy of the manifest at the facility as required in Section 7-804(2).

(7) A facility which receives a hazardous waste from a rail or water (bulk shipment) transporter shall also comply with 40 CFR Section 264.71(b).

(8) 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, in addition to notifying the Secretary, 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 Secretary a letter describing the discrepancy and attempts to reconcile it, and a copy of the manifest or shipping paper at issue.

7-705 EXPORTS OF HAZARDOUS WASTE

(1) The export of any waste defined as hazardous under 40 CFR Part 261 is prohibited unless:

(a) The primary exporter submits a notification in accordance with this section;

(b) The receiving country has consented to accept the hazardous waste;

(c) A copy of the EPA Acknowledgement of Consent accompanies the shipment in accordance with this section; and

(d) The hazardous waste shipment conforms to the terms of the receiving country's written consent as reflected in the EPA Acknowledgement of Consent.

(2) Primary exporters

Each primary exporter of a waste, which is defined as hazardous under 40 CFR Part 261, shall comply with the following requirements:

(a) A primary exporter of hazardous waste shall notify EPA of an intended export before such waste is scheduled to leave the United States. A complete notification shall 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:

(i) Name, mailing address, telephone number and EPA identification number of the primary exporter;

(ii) By consignee, for each hazardous waste type:

(A) A description of the hazardous waste and the EPA Hazardous Waste Number, U.S. DOT proper shipping name, hazard class and identification number (UN/NA) for each hazardous waste as identified in 49 CFR Parts 171 through 177;

(B) 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;

(C) The estimated total quantity of the hazardous waste in units as specified in the instructions to the Uniform Hazardous Waste Manifest;

(D) All points of entry to and departure from each foreign country through which the hazardous waste will pass;

(E) A description of the means by which each shipment of the

hazardous waste will be transported (e.g., mode of transportation vehicle, type(s) of container);

(F) A description of the manner in which the hazardous waste will be treated, stored or disposed of in the receiving country;

(G) The name and site address of the consignee and any alternate consignee; and

(H) 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) Notification shall be sent to the Office of International Activities (A-106), EPA, 401 M Street S.W., Washington, D.C. 20460 with "Attention: Notification to Export" prominently displayed on the front of the envelope.

(c) Except for changes to the telephone number in paragraph (2)(a)(i) of this section, changes to paragraph (2)(a)(ii)(E) of this section, and decreases in the quantity indicated pursuant to paragraph (1)(a)(ii)(C) of this section, when the conditions are 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 (2)(a)(ii)(H) of this section and in the ports of entry to and departure from transit countries pursuant to paragraph (2)(a)(ii)(D) of this section) has been obtained and the primary exporter receives an EPA Acknowledgement 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 (1)(a) of this section. Where a claim of confidentiality is asserted with respect to any notification information required by paragraph (1)(a) of this section, EPA may find the notification not complete until any such claim is resolved in accordance with 40 CFR Section 260.2.

(f) Where the receiving country consents to the receipt of the hazardous waste, EPA will forward an EPA Acknowledgement of Consent to the primary exporter for purposes of Section 7-705(1)(g)(viii). 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.

(g) The manifest requirements of Section 7-702 must be complied with except that:

(i) In lieu of the name, site address and EPA identification number of the designated permitted facility, the primary exporter must enter the name and site address of the consignee;

(ii) In lieu of the name, site address, and EPA identification number of a permitted alternate facility, the primary exporter may enter the name and site address of any alternate consignee;

(iii) In Special Handling Instructions and Additional Information, the primary exporter must identify the point of departure from the United States;

(iv) 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 Acknowledgement of Consent";

(v) The primary exporter from Vermont must use the Vermont Uniform Hazardous Waste Manifest;

(vi) 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.

(vii) In lieu of the requirements of Section 7-702(1)(g), where a shipment cannot be delivered for any reason to the designated or alternate consignee, the primary exporter must:

(A) Renotify EPA of a change in the conditions of the original notification to allow shipment to a new consignee in accordance with Section 7-705(1)(c) and obtain an EPA Acknowledgement of Consent prior to delivery; or

(B) Instruct the transporter to return the waste to the primary exporter in the United States or designate another facility within the United States; and

(C) Instruct the transporter to revise the manifest in accordance with the primary exporter's instructions.

(viii) The primary exporter must attach a copy of the EPA Acknowledgement of Consent to the shipment to the manifest which must accompany the hazardous waste shipment. The primary exporter must assure that the hazardous waste shipment conforms to the terms of the receiving country's written consent as reflected in the EPA Acknowledgement of Consent. For exports by rail or water (bulk shipment), the primary exporter must provide the transporter with an EPA Acknowledgement 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 Acknowledgement of Consent to the shipping paper.

(ix) 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 Section 7-705(2)(f).

(3) Transporters

In addition to the requirements of Section 7-703, a transporter transporting hazardous waste for export shall:

(a) Not accept such waste from a primary exporter or other person:

(i) If the transporter knows the shipment does not conform to the EPA Acknowledgement of Consent; and

(ii) Unless, in addition to a manifest signed in accordance with the provisions of Section 7-702, such waste is also accompanied by an EPA Acknowledgement of Consent which, except for shipment by rail, is attached to the manifest (or shipping paper for exports by water (bulk shipment)).

(b) Ensure that a copy of the EPA Acknowledgement of Consent accompanies the hazardous waste.

(c) Do the following if transporting the hazardous waste out of the country:

(i) Indicate on the manifest the date the hazardous waste left the United States.

(ii) Sign the manifest and retain one copy in accordance with Section 7-804(3);

(iii) Return a signed copy of the manifest to the generator; and

(iv) Give a copy of the manifest to a U.S. Customs official at the point of departure from the United States.

7-706 IMPORTS OF HAZARDOUS WASTE

(1) Any person who imports hazardous waste from a foreign country into Vermont must comply with the generator requirements of subchapter 3 and the special requirements of this section.

(2) When importing hazardous waste a person must meet all the requirements of Section 7-702(1)(a) for the manifest except that:

(a) 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.

(b) In place of the generator's signature on the certification statement, the U.S. importer or his or her agent must sign and date the certification and obtain the signature of the initial transporter.

(c) A person who imports hazardous waste into Vermont must use the Vermont Uniform Hazardous Waste Manifest.

7-707 EXCEPTION REPORTING

(1) Each generator who does not receive a completed copy of the manifest

(a) from the designated facility within 35 days, or

(b) from the foreign consignee within 60 days,

of the initial shipment must take all actions necessary to locate the shipment and manifest, including contacting the designated transporter and designated facility.

(2) Each generator who does not receive a completed copy of the manifest from the designated facility within 45 days of the initial shipment must immediately submit an exception report to the Secretary. The report must include a legible copy of

the manifest and a cover letter signed by the generator or his or her authorized representative explaining the efforts taken to locate the waste and results of those efforts.

(3) A primary exporter must file an exception report with the Secretary and the EPA Regional Administrator if:

(a) He or she 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.

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Subchapter 8: REPORTING, RECORDKEEPING AND MONITORING

7-801 Purpose, Scope, Applicability

This subchapter establishes requirements for reporting and recordkeeping by generators and transporters and requirements for conducting monitoring, sampling and studies. Reporting requirements for treatment, storage, and disposal facilities are specified in Subchapter 5.

7-802 Annual Reports

(1) Every person subject to these regulations who generates hazardous waste and is not a small quantity generator shall submit an annual report, on the Vermont Annual Report form provided by the Secretary. The report shall be submitted on or before March 1 of each year and shall describe all hazardous waste activity in the previous calendar year. The report shall accurately describe the composition, quantity, and destination of each hazardous waste stream generated and shall include a compilation of the data contained in all manifests prepared in such year.

(2) Every person subject to these regulations who treats, stores, recycles, or disposes of hazardous waste shall submit an annual report on the USEPA Annual Report form provided by the Secretary. The report shall be submitted on or before March 1 of each year and shall describe all hazardous waste activity in the previous calendar year. The report shall accurately describe the composition, quantity, and management of each hazardous waste stream treated, stored, recycled, or disposed of, and shall include a compilation of the data contained in all manifests prepared in such year.

(3) Exports of hazardous waste shall be reported by the primary exporter on the Exports Annual Report form. A copy of such form shall be sent to EPA in accordance with 40 CFR Section 262.56.

(4) The Secretary may require any small quantity generator to submit a report accurately describing the composition, quantity, and destination of all hazardous waste generated in a calendar year.

(5) A transporter of hazardous waste shall report to the Secretary as required in 7-405(3)(f).

7-803 Additional Reporting

The Secretary may require any generator, transporter or facility to submit such additional information as he or she deems necessary to implement and manage a hazardous waste program under these regulations.

7-804 RECORDKEEPING

(1) All generators shall keep the following records for the specified time periods:

(a) A copy of each annual report and manifest exception report for at least three (3) years from the due date of the report; and

(b) A copy of any test result, waste analysis or other determination made under Section 7-304 for at least three (3) years from the date the waste was last sent to an on-site or off-site treatment, storage or disposal facility.

(2) All generators and transporters shall keep a copy of each manifest signed by the generator, transporter and designated facility for at least three (3) years from the date that the waste involved was accepted by the transporter except for:

(a) Water (bulk shipment) transporters who shall comply with 40 CFR 263.22(b);

(b) Rail transporters who shall comply with 40 CFR 263.22(c); and

(c) Initial transporters that deliver waste to a next designated transporter that shall retain a copy of the manifest which has been signed by the generator and next designated transporter.

(3) 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 (3) years from the date the hazardous waste was accepted by the initial transporter.

(4) For all exports a primary exporter must:

(a) Keep a copy of each notification of intent to export for a period of at least three (3) years from the date the hazardous waste was accepted by the initial transporter;

(b) Keep a copy of each EPA Acknowledgement of Consent for a period of at least three (3) years from the date the hazardous waste was accepted by the initial transporter;

(c) Keep a copy of each confirmation of delivery of the hazardous waste from the consignee for at least three (3) years from the date the hazardous waste was accepted by the initial transporter; and

(d) Keep a copy of each annual report for a period of at least three years from the due date of the report.

(5) All record retention periods specified in this section shall be automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Secretary, or as requested by the EPA Administrator in the case of records required for hazardous waste exports.

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Subchapter 9: ACCESS TO PUBLIC RECORDS

7-901 PURPOSE, SCOPE, APPLICABILITY

(1) This subchapter describes requirements for the availability of public information concerning facilities and sites for the treatment, storage, and disposal of hazardous waste.

(2) As is specified in 1 V.S.A. Section 316(e), information concerning facilities and sites for the treatment, storage, and disposal of hazardous waste shall be made available to the public in substantially the same manner and to the same degree as such information is made available under the Resource Conservation and Recovery Act of 1976, as amended, 42 U.S.C. section 82, subchapter 3, and the Federal Freedom of Information Act, 5 U.S.C. section 552 et seq. In the event that there is a conflict between state requirements for access to public records under 1 V.S.A. Chapter 5, Subchapter 3 and the cited federal laws, federal law shall govern.

(3) For the purposes of this subchapter, "public record" or "public document means any document, writing, photograph, sound or magnetic recording, drawing, or other similar things by which information has been preserved from which the information can be retrieved and copied, and which is, was, or is alleged to be possessed by the Secretary. 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 by humans. The term includes documents and the like that were created or acquired by the Secretary or his or her predecessors by use of government funds or in the course of transacting official business. However, the term does not include materials that are legally owned by an employee of the Secretary in his or her purely personal capacity. Nor does the term include materials published by non-state organizations which are readily available to the public, such as books, journals, and periodicals available through reference libraries, even if such materials are in the Secretary's possession.

7-902 EXEMPTION CATEGORIES

(1) There are nine exclusive categories of matters that are exempt from the disclosure requirements of 1 V.S.A. Section 316(e) and this subchapter. No request for an existing, locate public record in the Secretary's possession shall be denied unless the public record contains (or its disclosure would reveal) matters that are:

(a) Specifically authorized under criteria established by a federal executive order to be kept secret in the interest of national defense or foreign policy and are in fact properly classified pursuant to such executive order;

(b) Related solely to the internal personnel rules and practices of the Secretary;

(c) Specifically exempted from disclosure by statute, 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;

(d) Trade secrets and commercial or financial information obtained from a person and privileged or confidential;

(e) Interagency or intra-agency memorandums or letters which would not be made available by law to a party other than an agency in litigation with the Secretary;

(f) Personal and medical files and similar files the disclosure of which would constitute a clearly unwarranted invasion of personal privacy;

(g) Investigatory records compiled for law enforcement purposes, but only to the extent that the production of such records would (1) interfere with enforcement proceedings; (2) deprive a person of a right to a fair trial or an impartial adjudication; (3) constitute an unwarranted invasion of personal privacy; (4) disclose the identity of a confidential source and, in the case of a record 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, confidential information furnished only by the confidential source; (5) disclose investigative techniques and procedures; or (6) endanger the life or physical safety of law enforcement personnel; or

(h) 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.

7-903 PROCEDURAL REQUIREMENTS

(1) In responding to requests for public records, the Secretary shall use the procedures established by 1 V.S.A. Section 318.

(2) If a request for a public record is denied by the Secretary, the requestor may appeal to the Secretary as specified in 1 V.S.A. Section 318.

(3) If the Secretary denies an appeal, or if the Secretary fails to comply with the

applicable time limit provisions of 1 V.S.A. Section 318, the requestor may appeal to the appropriate superior court as specified in 1 V.S.A. Section 319.

7-904 SUBSTANTIVE REQUIREMENTS

(1) All public records shall be available to the public unless they are exempt under Section 7-902.

(2) The types of information that the Secretary would normally release under this subchapter, subject to valid exemption claims under Section 7-902, include but are not limited to the following:

(a) Certification applications and modifications;

(b) Annual reports;

(c) Closure plans;

(d) Notification of facility closure;

(e) Contingency plan incident reports;

(f) Delisting petitions;

(g) Petitions for recycling/reuse exemptions;

(h) Financial responsibility instruments;

(i) Environmental monitoring data;

(j) Transporter spill reports;

(k) International shipment reports;

(l) Manifests or manifest exception or discrepancy reports;

(m) Facility EPA identification numbers;

(n) General correspondence with the facility;

(o) Enforcement orders;

(p) Inspection reports; and

(q) Results of corrective action investigations.

7-905 PUBLIC REVIEW OF FILES

(1) The public may review files in possession of the Secretary, except those exempted under Section 7-902, after having set up an appointment with the person or persons responsible for the files. The person or persons responsible for the files may waive the requirement for an appointment if they determine that a waiver is appropriate. Factors to be considered in making such a determination include the time involved to locate and make available requested files, other duties or responsibilities at the time of the request, and whether the files have been reviewed to assure that no records exempted under Section 7-902 are present.

(2) In responding to requests for appointments to review files, the Secretary shall use the procedures established by 1 V.S.A. Section 318.

(3) When reviewing files, the public may not remove any records from the files. Nor may the public remove any of the files themselves from the area designated by the Secretary for file review. If copies are desired, the appropriate records shall be clipped or otherwise designated and presented to the person responsible for the files for copying. Any such copying shall be performed within five working days of the request.

7-906 FEES: PAYMENT; WAIVER

(1) Except as otherwise specified in this section, a fee of $0.10 per page of printed material will be charged for copies requested. For copies of other public records, such as photographs, microfilms, magnetic tapes or diskettes, the charge shall be for the actual direct costs to the Secretary of reproducing the requested record.

(2) No charge shall be made:

(a) For the first 20 pages of copied material in any one week period;

(b) For materials that are normally produced in some quantity and/or made available to the public, such as regulations, statements of policy or procedure, press releases, or educational materials;

(c) For furnishing records requested by the state legislature, unless the records are requested for the benefit of an individual member of the legislature or for a constituent;

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

(e) For furnishing records needed by a state contractor, subcontractor, or grantee to perform the work required by the state contract or grant.

(3) Payments may be made directly to the Secretary's staff. Checks or money orders shall be made payable to the "Treasurer, State of Vermont." Payments are due 45 days from the date of billing. Failure to pay bills within the prescribed time frame may result in the Secretary deciding to deny future request for public records until the requestor pays the total amount of fees due.

(4) The fee chargeable under this section shall be reduced or waived if the Secretary determines that a waiver or reduction of the fee is in the public interest because furnishing the information can be considered as primarily benefiting the general public. Reduction or waiver of fees shall be considered (but need not necessarily be granted) in connection with each request from a representative of the press or other communications medium, or from a public interest group.

7-907 CONFIDENTIAL BUSINESS INFORMATION

(1) As is specified by Section 7-902(1)(d), certain confidential business information may be exempted from public disclosure. Any such information shall be determined by the Secretary to be confidential if:

(a) The business has asserted a business confidentiality claim that 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;

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

(e) Either:

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

(ii) The information is voluntarily submitted information (i.e., it is not required to be submitted by any statute or regulation) and its disclosure would be likely to impair the Secretary's ability to obtain necessary information in the future.

(2) If a business does not assert a claim of business confidentiality at the first

opportunity provided by the Secretary, the information will be released upon request without further notice to the business. In addition, for any information submitted in connection with an application for certification under Section 7-506, any business confidentiality claim must be asserted at the time of submission of the information to the Secretary.

(3) Claims of confidentiality for the name and address of any applicant for certification or certified facility shall be denied.

APPENDICES

to the

State of Vermont

Hazardous Waste Management Regulations

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APPENDIX I

HAZARDOUS WASTES FROM SPECIFIC SOURCES

Appendix I
Hazardous Wastes from Specific Sources

The following wastes are referred to in Section 7-211 and are hazardous wastes from specific sources.

Industry & EPA Hazardous Waste Number	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 & 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)
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)
K093.....	Distillation light ends from the production of phthalic anhydride from orthoxylene.	(T)
K094.....	Distillation bottoms from the production of phthalic anhydride from ortho-xylene.	(T)
K025.....	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.	(T)

K026..... Stripping still tails from the production of methyl ethyl 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)

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)

K030..... Column bottoms or heavy ends from the combined production of trichloroethylene and perchloroethylene. (T)

K083..... Distillation bottoms from aniline production. (T)

K103..... Process residues from aniline extraction from the production of aniline. (T)

K104..... Combined wastewater streams generated from nitrobenzene/aniline production. (T)

K085..... Distillation or fractionation column bottoms from the production of chlorobenzenes. (T)

K105..... Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes. (T)

K111..... Product washwaters 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..... Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene. (T)

K118..... Spend adsorbent 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)

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 hexachlorocyclopentadiene 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 diethylphosophorodithioic 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 tetrachlorobenzene 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 supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts. (T)

K124..... Reactor vent scrubber water from the production of ethylenebisdithiocarbamic 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)

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)

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 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 ferrochromiumsilicon production. (T)

K091..... Emission control dust or sludge from ferrochromium production. (T)

Secondary lead:

K069..... Emission control dust/sludge from secondary lead smelting. (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 organoarsenic compounds. (T)

K101..... Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organoarsenic 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)

APPENDIX II

HAZARDOUS CONSTITUENTS

Appendix II
Hazardous Constituents

Chemical Common Name	Chemical Abstracts Name	Abstracts Number
Acetonitrile	Same	75-05-8
Acetophenone	Ethanone, 1-phenyl-	98-86-2
2-Acetylaminofluorene	Acetamide, N-9H-fluoren-2-yl-	53-96-3
Acetyl chloride	Same	75-36-5
1-Acetyl-2-thiourea	Acetamide, N-(aminothioxymethyl)-	591-08-2
Acrolein	2-Propenal	107-02-8
Acrylamide	2-Propenamide	79-06-1
Acrylonitrile	2-Propenenitrile	107-13-1
Aflatoxins	Aflatoxin	1402-68-2
Aldicarb	Propanal, 2-methyl-2-(methylthio)-O-[(methylamino)carbonyl]oxime	116-06-3
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)-	309-00-02
Allyl alcohol	2-Propen-1-ol	107-18-6
Allyl chloride	1-Propene, 3-chloro-	107-05-1
Aluminum phosphide	Same	20859-73-8
4-Aminobiphenyl	(1,1'-Biphenyl)-4-amine	92-67-1
5-(Aminomethyl)-3-isoxazolol	3(2H)-isoxazolone, 5-(aminomethyl)-	2763-96-4
4-Aminopyridine	4-Pyridinamine	504-24-5
Amitrole	1H-1,2,4-Triazol-3-amine	61-82-5
Ammonium vanadate	Vanadic acid, ammonium salt	7803-55-6
Aniline	Benzenamine	62-53-3
Antimony & compounds, N.O.S.*	Antimony	7440-36-0
Aramite	Sulfurous acid, 2-chloroethyl-, 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	140-57-8
Arsenic & compounds, N.O.S.*	Arsenic	7440-38-2
Arsenic acid	Arsenic acid AsH_3O_4	7778-39-4
Arsenic pentoxide	Arsenic oxide As_2O_5	1303-28-2
Arsenic trioxide	Arsenic oxide As_2O_3	1327-53-3
Auramine	Benzamine, 4,4'-carbonimidoylbis-[N,N-dimethyl-	492-80-8
Azaserine	L-Serine, diazoacetate (ester)	115-02-6
Barium & compounds N.O.S.*	Barium	7440-39-3
Barium cyanide	Same	542-62-1

Benz[c]acridine	Same	225-51-4
Benz[a]anthracene	Same	56-55-3
Benzal chloride	Benzene, (dichloromethyl)-	98-87-3
Benzene	Same	71-43-2
Benzenearsonic acid	Arsonic acid, phenyl-	98-05-5
Benzidine	[1,1'-Biphenyl]-4,4'-diamine	92-87-5
Benzo[b]fluoranthene	Benz[e]acephenanthrylene	205-99-2
Benzo[j]fluoranthene	Same	205-82-3
Benzo[a]pyrene	Same	50-32-8
p-Benzoquinone	2,5-Cyclohexadiene-1,4-dione	106-51-4
Benzotrichloride	Benzene, (trichloromethyl)-	98-07-7
Benzyl chloride	Benzene, (chloromethyl)-	100-44-7
Beryllium & compounds N.O.S.*	Beryllium	7440-41-7
Bis(2-chloromethoxy) ethane	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-	111-91-1
Bis(2-chloroethyl) ether	Ethane, 1,1'-oxybis[2-chloro-	111-44-4
Bis(2-chloroisopropyl ether	Propane, 2,2'-oxybis[2-chloro-	39638-32-9
Bis(chloromethyl) ether	Methane, oxybis[chloro-	542-88-1
Bis(2-ethylhexyl) phthalate	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	117-81-7
Bromoacetone	2-Propanone, 1-bromo-	598-31-2
Bromoform	Methane, tribromo-	75-25-2
4-Bromophenyl phenyl ether	Benzene, 1-bromo-4-phenoxy-	101-55-3
Brucine	Strychnidin-10-one, 2,3-dimethoxy	357-57-3
Butyl benzyl phthalate	1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester	85-68-7
Cacodylic acid	Arsenic acid, dimethyl-	75-60-5
Cadmium & compounds, N.O.S.*	Cadmium	7440-43-9
Calcium chromate	Chromic acid, calcium salt	13765-19-0
Calcium cyanide	Same	592-01-8
Carbamic acid, ethyl ester	Same	51-79-6
Carbon disulfide	Carbon bisulfide	75-15-0
Carbon oxyfluoride	Carbonic difluoride	353-50-4
Carbon tetrachloride	Methane, tetrachloro-	56-23-5
Chloral	Acetaldehyde, trichloro-	75-87-6
Chlorambucil	Benzenebutanoic acid, 4-[bis(2-chloroethyl)amino-	305-03-3
Chlordane, alpha & gamma isomers	4,7-Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-	

	2,3,3a,4,7,7a-hexahydro-	57-74-9
Chlorinated benzenes, N.O.S.*	.....	.....
Chlorinated ethane, N.O.S.*	.....	.....
Chlorinated fluorocarbons, N.O.S.*	.....	.....
Chlorinated napthalene, N.O.S.*	.....	.....
Chlorinated phenol, N.O.S.*	.....	.....
Chlornaphazine	2-Naphthalenamine, N,N-bis(2-chloroethyl)-	494-03-1
Chloroacetaldehyde	Acetaldehyde, chloro-	107-20-0
Chloroalkyl ethers, N.O.S.*	.....	.....
p-Chloroaniline	Benzenamine, 4-chloro-	106-47-8
Chlorobenzene	Benzene, chloro-	108-90-7
Chlorobenzilate	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester	510-15-6
p-Chloro-m-cresol	Phenol, 4-chloro-3-methyl-	59-50-7
1-Chloro-2,3-epoxypropane	Oxirane, (chloromethyl)-	106-89-8
2-Chloroethyl vinyl ether	Ethene, (2-chloroethoxy)-	110-75-8
Chloroform	Methane, trichloro-	67-66-3
Chloromethyl methyl ether	Methane, chloromethoxy-	107-30-2
beta-Chloronaphthalene	Napthalene, 2-chloro-	91-58-7
o-Chlorophenol	Phenol, 2-chloro-	95-57-8
1-(o-Chlorophenyl) thiourea	Thiourea, (2-chlorophenyl)-	5344-82-1
Chloroprene	2-Chloro-1,3-butadiene	126-99-8
3-Chloropropionitrile	Propanenitrile, 3-chloro-	542-76-7
Chromium & compounds N.O.S*	Chromium	7440-47-3
Chrysene	Same	218-01-9
Citrus red No.2	2-Naphthalenol, 1-[(2,5-dimethoxyphenyl)azo]-	6358-53-8
Coal tars		8005-45-2
Copper cyanide	Copper cyanide CuCN	544-92-3
Creosote	Same	8001-58-9
Cresols (Cresylic acid)	Phenol, methyl-	1319-77-3
Crotonaldehyde	2-Butenal	4170-30-3
Cyanides (soluble salts & complexes) N.O.S.*	.....	.....
Cyanogen	Ethanedinitrile	460-19-5
Cyanogen bromide	Same	506-68-3
Cyanogen chloride	Same	506-77-4

Cycasin	beta-D-Glucopyranoside,(methyl-ONN-azoxy) methyl-	14901-08-7
2-Cyclohexyl-4,6-dinitrophenol	Phenol, 2-cyclohexyl-4,6-dinitro-	131-89-5
Cyclophosphamide	2H-1,3,2-Oxazaphosphorin-2-amine,N,N-bis (2-chloroethyl)tetra-hydro-,2-oxide	50-18-0
2,4-D, salts & esters	Acetic acid,(2,4-dichloro-phenoxy)-, salts & esters	94-75-7
Daunomycin	5,12-Naphthacenedione,(8S-cis)-8-acetyl-10-[(3 amino-2,3,6-tri-deoxy-alpha-L-lyxo-hexopyranosyl) oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-	20830-81-3
DDD	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-	72-54-8
DDE	Benzene, 1,1'-(dichloroethenylidene)bis[4-chloro-	72-55-9
DDT	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-	50-29-3
Diallate	Carbamothioic acid, bis(1-methyl-ethyl)-S-(2,3-dichloro-2-propenyl) ester	2303-16-4
Dibenz[a,h]acridine	Same	226-36-8
Dibenz[a,j]acridine	Same	224-42-0
Dibenz[a,h]anthracene	Same	53-70-3
7H-Dibenzo[c,g]carbazole	Same	194-59-2
Dibenzo[a,e]pyrene	Naphtho[1,2,3,4-def]chrysene	192-65-4
Dibenzo[a,h]pyrene	Dibenzo[b,def]chrysene	189-64-0
Dibenzo[a,i]pyrene	Benzo[rst]pentaphene	189-55-9
1,2-Dibromo-3-chloro-propane	Propane, 1,2-dibromo-3-chloro-	96-12-8
Dibutyl phthalate	1,2-Benzenedicarboxylic acid, dibutyl ester	84-74-2
o-Dichlorobenzene	Benzene, 1,2-dicloro-	95-50-1
m-Dichlorobenzene	Benzene, 1,3-dichloro-	541-73-1
p-Dichlorobenzene	Benzene, 1,4-dichloro-	106-46-7
Dichlorobenzene, NOS*	Benzene, dichloro-	25321-22-6
3,3'-Dichlorobenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-	91-94-1
1,4-Dichloro-2-butene	2-Butene, 1,4-dichloro-	764-41-0
Dichlorodifluoromethane	Methane, dichlorodifluoro-	75-71-6
1,2-Dichloroethylene	Ethene, 1,2-dichloro- (E)-	156-60-5
Dichloroethylene, NOS*	Dichloroethylene	25323-30-2
1,1-Dichloroethylene	Ethene, 1,1-dichloro-	75-35-4
Dichloroethyl ether	Ethane, 1,1'oxybis[2-chloro-	111-44-4
Dichloroisopropyl ether	Propane, 2,2'-oxybis[2-chloro-	108-60-1
Dichloromethoxy ethane	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-	111-91-1
Dichloromethyl ether	Methane, oxybis[chloro-	542-88-1
2,4-Dichlorophenol	Phenol, 2,4-dichloro-	120-83-2
2,6-Dichlorophenol	Phenol, 2,6-dichloro-	87-65-0
Dichlorophenylarsine	Arsonous dichloride, phenyl-	696-28-6
Dichloropropane, NOS*	Propane, dichloro-	26638-19-7
Dichloropropanol, NOS*	Propanol, dichloro-	26545-73-3
Dichloropropene, NOS*	1-Propene, dichloro-	26952-23-8
1,3-Dichloropropene	1-Propene, 1,3-dichloro-	542-75-6

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,6beta,6aalpha,7beta,7aalpha)-	60-57-1
1,2:3,4-Diepoxybutane	2,2'-Bioxirane	1464-53-5
Diethylarsine	Arsine, diethyl-	692-42-2
1,4 Diethyleneoxide	1,4 Dioxane	123-91-1
Diethylhexyl phthalate	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester	117-81-7
N,N'-Diethythydrazine	Hydrazine, 1,2-diethyl-	1615-80-1
O,O-Diethyl S-methyl-dithiophosphate	Phosphorodithioic acid, O,O-di-ethyl S-methyl ester	3288-58-2
Diethyl-p-nitro phenyl phosphate	Phosphoric acid, diethyl-4-nitro-phenyl ester	311-45-5
Diethyl phthalate	1,2-Benzenedicarboxylic acid, diethyl ester	84-66-2
O,O-Diethyl O-pyrazinyl phosphorothioate	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	297-97-2
Diethylstilbesterol	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl)bis,(E)-	56-53-1
Dihydrosafrole	1,3 Benzodioxole, 5-propyl-	94-58-6
3,4-Dihydroxy-alpha-(methylamino)methyl benzyl alcohol	(+-)-1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino) ethyl]-	329-65-7
Diisopropylfluoro-phosphate(DFP)	Phosphorofluoridic acid, bis(1-methylethyl) ester	55-91-4
Dimethoate	Phosphorodithioic acid, O,O-di-methyl S-[2-(methylamino)-2-oxoethyl]ester	60-51-5
3,3'-Dimethoxybenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy-	119-90-4
p-Dimethylaminoazo-benzene	Benzenamine, N,N-dimethyl-4-(phenylazo)-	60-11-7
7,12-Dimethylbenz[a]-anthracene	Benz[a]anthracene, 7,12-dimethyl	57-97-6
3,3'-Dimethylbenzidine	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-	119-93-7
Dimethylcarbamoyl chloride	Carbamic chloride, dimethyl-	79-44-7
1,1-Dimethylhydrazine	Hydrazine, 1,1-dimethyl-	57-14-7
1,2-Dimethylhydrazine	Hydrazine, 1,2-dimethyl-	540-73-8
alpha,alpha-Dimethyl-phenethylamine	Benzeneethanamine, alpha,alpha-dimethyl-	122-09-8
2,4-Dimethylphenol	Phenol, 2,4-dimethyl-	105-67-9
Dimethylphthalate	1,2-Benzenedicarboxylic acid, dimethyl ester	131-11-3
Dimethyl sulfate	Sulfuric acid, dimethyl ester	77-78-1
Dinitrobenzene, NOS*	Benzene, dinitro-	25154-54-5
4,6-Dinitro-o-cresol and salts	Phenol, 2-methyl-4,6-dinitro- and salts	534-52-1
2,4-Dinitrophenol	Phenol, 2,4-dinitro-	51-28-5
2,4-Dinitrotoluene	Benzene, 1-methyl-2,4-dinitro-	121-14-2
2,6-Dinitrotoluene	Benzene, 2-methyl-1,3-dinitro-	606-20-2
Dinoseb	Phenol, 2-(l-methylpropyl)-4,6-dinitro-	88-85-7

Di-n-octyl phthalate	1,2-Benzenedicarboxylic acid, dioctyl ester	117-84-0
Diphenylamine	Benzenamine, N-phenyl-	122-39-4
1,2-Diphenylhydrazine	Hydrazine, 1,2-diphenyl-	122-66-7
Di-n-propylnitrosamine	1-Propanamine, N-nitroso-N-propyl-	621-64-7
Disulfoton	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl] ester	298-04-4
Dithiobiuret	Thioimidodicarbonic diamide	541-53-7
Endosulfan	6,9-Methano-2,4,3-benzodioxa-thiepen, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-3,oxide	115-29-7
Endothall	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid	145-73-3
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-(1aalpha, 2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-	72-20-8
Endrin metabolites	.....	.....
Epichlorohydrin	Oxirane, (choromethyl)-	106-89-8
Epinephrine	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino) ethyl]-,(R)-	51-43-4
Ethyl carbamate (Urethane)	Carbamic acid, ethyl ester	51-79-6
Ethyl cyanide	Propanenitrile	107-12-0
Ethylenebisdithiocarbamic acid, salts & esters	Carbamodithioic acid, 1,2-ethane-diylbis-,salts & esters	111-54-6
Ethylene dibromide	Ethane, 1,2-dibromo-	106-93-4
Ethylene dichloride	Ethane, 1,2-dichloro-	107-06-2
Ethylene glycol	Same	107-21-1
Ethylene glycol mono-ethyl ether	Ethanol, 2-ethoxy-	110-80-5
Ethyleneimine	Aziridine	151-56-4
Ethylene oxide	Oxirane	75-21-8
Ethylenethiourea	2-Imidazolidinethione	96-45-7
Ethylidene dichloride	Ethane, 1,1-dichloro-	75-34-3
Ethyl methacrylate	2-Propenoic acid, 2-methyl-, ethyl ester	97-63-2
Ethylmethane sulfonate	Methanesulfonic acid, ethyl ester	62-50-0
Famphur	Phosphorothioic acid, O-[4-[(dimethylamino) sulfonyl]phenyl] O,O-dimethyl ester	52-85-7
Fluoranthene	Same	206-44-0
Fluorine	Same	7782-41-4
Fluoroacetamide	Acetamide, 2-fluoro-	640-19-7
Fluoroacetic acid, sodium salt	Acetic acid, fluoro-, sodium salt	62-74-8
Formaldehyde	Same	50-00-0
Formic Acid	Same	64-18-6
Glycidylaldehyde	Oxiranecarboxaldehyde	765-34-4
Halomethanes, N.O.S.*	.....	.....
Heptachlor	4,7-Methano-1H-indene,1,4,5,6,7,8,8-heptachloro-3a, 4,7,7a-tetra-hydro-	76-44-8

Heptachlor epoxide	2,5-Methano-2H-indeno[1,2b]-oxirene, 2,3,4,5,6,7,7-heptachloro-1a,1b,5,5a,6,6a-hexahydro-(alpha, beta & gamma isomers)	1024-57-3
Hexachlorobenzene	Benzene, hexachloro-	118-74-1
Hexachlorobutadiene	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-	87-68-3
Hexachlorocyclopentadiene	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-	77-47-4
Hexachlorodibenzo-p-dioxins	.....	.....
Hexachlorodibenzofurans	.....	.....
Hexachloroethane	Ethane, hexachloro-	67-72-1
Hexachlorophene	Phenol, 2,2'-methylenebis[3,4,6-trichloro-	70-30-4
Hexachloropropene	1-Propene, hexachloro-	1888-71-7
Hexaethyltetraphosphate	Tetraphosphoric acid, hexaethyl ester	757-58-4
Hydrazine	Same	302-01-2
Hydrogen cyanide	Hydrocyanic acid	74-90-8
Hydrogen fluoride	Hydrofluoric acid	7664-39-3
Hydrogen sulfide	Same	7783-06-4
Indeno[1,2,3cd]-pyrene	Same	193-39-5
Isobutyl alcohol	1-Propanol, 2-methyl-	78-83-1
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-	
Isosafrole	1,3-Benzodioxole, 5-(1-propenyl)-	120-58-1
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
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
Lead & compounds NOS*	.....	7439-92-1
Lead acetate	Acetic acid, lead(2+)salt	301-04-2
Lead phosphate	Phosphoric acid, lead(2+)salt	7446-27-7
Lead subacetate	Lead, bis(acetato-O)tetrahydroxy-tri-	1335-32-6
Lindane	Cyclohexane, 1,2,3,4,5,6-Hexachloro-	58-89-9
Maleic anhydride	2,5-Furandione	108-31-6
Maleic hydrazide	3,6-Pyridazinedione, 1,2-dihydro-	123-33-1
Malononitrile	Propanedinitrile	109-77-3
Melphalan	L-Phenylalanine, 4-[bis(2-chloro-ethyl)amino]-	148-82-3
Mercury fulminate	Fulminic acid, mercury(2+)salt	628-86-4
Mercury & compounds N.O.S.*	Same	7439-97-6
Methacrylonitrile	2-Propanenitrile, 2-methyl-	126-98-7
Methapyrilene	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'(2-thienylmethyl)-	91-80-5
Methomyl	Acetimidic acid, N-[(methylcarbamoyl)oxy]thio-,	

	methyl ester	16752-77-5
Methoxychlor	Benzene, 1,1'-(2,2,2-trichloroethylidene)[4-methoxy-	72-43-5
Methyl bromide	Methane, bromo-	74-83-9
Methyl chloride	Methane, chloro-	74-87-3
Methylchlorocarbonate	Carbonchloridic acid, methyl ester	79-22-1
Methyl chloroform	Ethane, 1,1,1-trichloro-	71-55-6
3-Methylcholanthrene	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	56-49-5
4,4'-Methylenebis(2-chloroaniline	Benzenamine, 4,4'-methylenebis[2-chloro-	101-14-4
Methylene bromide	Methane, dibromo-	74-95-3
Methylene chloride	Methane, dichloro-	75-09-2
Methyl ethyl ketone (MEK)	2-Butanone	78-93-3
Methyl ethyl ketone peroxide	2-Butanone, peroxide	1338-23-4
Methyl hydrazine	Hydrazine, methyl-	60-34-4
Methyl iodine	Methane, iodo-	74-88-4
Methyl isocyanate	Methane, isocyanato-	624-83-9
2-Methyllactonitrile	Propanenitrile, 2-hydroxy-2-methyl-	75-86-5
Methyl methacrylate	2-Propenoic acid, 2-methyl-, methyl ester	80-62-6
Methyl methanesulfonate	Methanesulfonic acid, methyl ester	66-27-3
2-Methyl-2-(methylthio) propionaldehyde-O-(methylcarbamoyl) oxime	Same	116-06-3
Methyl parathion	Phosphorothioic acid, O,O-dimethyl-O-(4-nitro phenyl)ester	296-00-0
Methylthiouracil	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-	56-04-2
Mitomycin C	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-[1aR-(laalpha, 8beta,8aalpha,8balpha)]-	50-07-7
MNNG	Guanidine, N-methyl-N'-nitro-N-nitroso-	70-25-7
Mustard gas	Ethane, 1,1'-thiobis[2-chloro-	505-60-2
Naphthalene	Same	91-20-3
1,4-Naphthoquinone	1,4-Naththalenedione	130-15-4
alpha-Naphthylamine	1-Naphthalenamine	134-32-7
beta-Naphthylamine	2-Naphthalenamine	91-59-8
alpha-Naphthylthiourea	Thiourea, 1-naphthalenyl-	86-88-4
Nickel & compounds N.O.S.*	Same	7440-02-0
Nickel carbonyl	Nickel carbonyl, (T-4)	13463-39-3
Nickel cyanide	Same	557-19-7
Nicotine & salts	Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, & salts	54-11-5
Nitric oxide	Nitrogen oxide NO	10102-43-9
p-Nitroaniline	Benzenamine, 4-nitro-	100-01-6
Nitrobenzene	Benzene, nitro	98-95-3

Nitrogen dioxide	Nitrogen oxide NO_2	10102-44-0
Nitrogen mustard & hydrochloride salt	Ethanamine, 2-chloro-, N-(2-chloroethyl)-N-methyl-, & hydrochloride salt	51-75-2
Nitrogen mustard N-oxide & hydrochloride salt	Ethanamine, 2-chloro-N-(2-chloroethyl)-N-methyl-, N-oxide & hydrochloride salt	126-85-2
Nitroglycerin	1,2,3-Propanetriol, trinitrate	55-63-0
p-Nitrophenol	Phenol, 4-nitro-	100-02-7
2-Nitropropane	Propane, 2-nitro-	79-46-9
4-Nitroquinoline-1-oxide	Quinoline, 4-nitro-1-oxide-	56-57-5
Nitrosamine, NOS*	.....	35576-91-1
N-Nitrosodi-n-butylamine	1-Butanamine, N-butyl-N-nitroso-	924-16-3
N-Nitrosodiethanolamine	Ethanol, 2,2'-(nitrosoimino)bis-	1116-54-7
N-Nitrosodiethylamine	Ethanamine, N-ethyl-N-nitroso-	55-18-5
N-Nitrosodimethylamine	Methamine, N-methyl-N-nitroso-	62-75-9
N-Nitroso-N-ethyl urea	Urea, N-ethyl-N-nitroso-	759-73-9
N-Nitrosomethylethyl amine	Ethanamine, N-methyl-N-nitroso-	10595-95-6
N-Nitroso-N-methylurea	Urea, N-methyl-N-nitroso-	684-93-5
N-Nitroso-N-methyl-urethane	Carbamic acid, methylnitroso-, ethyl ester	615-53-2
N-Nitrosomethylvinyl amine	Vinylamine, N-methyl-N-nitroso-	4549-40-0
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
N-Nitrosopyrrolidine	Pyrrolidine, 1-nitroso-	930-55-2
N-Nitrososarcosine	Glycine, N-methyl-N-nitroso-	13256-22-9
5-Nitro-o-toluidine	Benzenamine, 2-methyl-5-nitro-	99-55-8
Octamethylpyrophosphoramide	Diphosphoramide, octamethyl-	152-16-9
Osmium tetroxide	Osmium oxide (OsO_4)	20816-12-0
Paraldehyde	1,3,5-Trioxane, 2,4,6-trimethyl-	123-63-7
Parathion	Phosphorothioic acid, O,O-diethyl-O-(4-nitrophenyl) ester	56-38-2
Pentachlorobenzene	Benzene, pentachloro-	608-93-5
Pentachlorodibenzo-p-dioxins	.....	.....
Pentachlorodibenzo furans	.....	.....
Pentachloroethane	Ethane, pentachloro-	76-01-7
Pentachloronitrobenzene (PCNB)	Benzene, pentachloronitro-	82-68-8
Pentachlorophenol	Phenol, pentachloro-	87-86-5
Perchloromethyl-mercaptan	Methanethiol, trichloro-	75-70-7

Phenacetin	Acetamide, N-(4-ethoxyphenyl)-	62-44-2
Phenol	Same	108-95-2
Phenylenediamine	Benzenediamine	25265-76-3
Phenylmercury acetate	Mercury, (aceto-O)phenyl-	62-38-4
Phenylthiourea	Thiourea, phenyl-	103-85-5
Phosgene	Carbonic dichloride	75-44-5
Phosphine	Same	7803-51-2
Phorate	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio) methyl] ester	298-02-2
Phthalic acid esters, N.O.S.*	.....	.....
Phthalic anhydride	1,3-Isobenzofurandione	85-44-9
2-Picoline	Pyridine, 2-methyl-	109-06-8
Polychlorinated biphenyls N.O.S.*	.....	.....
Potassium cyanide	Same	151-50-8
Potassium silver cyanide	Argentate(1-),bis(cyano-C)-, potassium	506-61-6
Pronamide	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	23950-58-5
1,3-Propane sulfone	1,2-Oxathiolane, 2,2-dioxide	1120-71-4
n-Propylamine	1-Propanamine	107-10-8
Propargyl alcohol	2-Propyn-l-ol	107-19-7
Propylene dichloride	Propane, 1,2-dichloro-	78-87-5
1,2-Propylenimine	Aziridine, 2-methyl-	75-55-8
Propylthiouracil	4(1H)-pyrimidinone, 2,3-dihydro-6-propyl-2-thioxo-	51-52-5
Pyridine	Same	110-86-1
Reserpine	Yohimban-16-carboxylic acid,11,17-dimethyoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester	50-55-5
Resorcinol	1,3-Benzenediol	108-46-3
Saccharin & salts	1,2-Benzisothiazol-3(2H)-one,1,1-dioxide & salts	81-07-2
Safrole	1,3-Benzodioxole, 5-(2-propenyl)-	94-59-7
Selenium dioxide	Selenious acid	7783-00-8
Selenium & compounds N.O.S.*	Selenium	7782-49-2
Selenium sulfide	Same	7446-34-6
Selenourea	Same	630-10-4
Silver & compounds N.O.S.*	Silver	7440-22-4
Silver cyanide	Same	506-64-9
Silvex (2,4,5 TP) salts & esters	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-salts & esters	93-72-1
Sodium cyanide	Same	143-33-9
Streptozotocin	D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-	18883-66-4
Strychnine & salts	Strychnidin-10-one & salts	57-24-9
TCDD	Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-	1746-01-6

1,2,4,5-Tetrachlorobenzene	Benzene, 1,2,4,5-tetrachloro-	95-94-3
Tetrachlorodibenzo-p-dioxins	.....	.....
Tetrachlorodibenzofurans	.....	.....
Tetrachloroethane, N.O.S.*	Ethane, tetrachloro-, N.O.S	25322-20-7
1,1,1,2-Tetrachloroethane	Ethane, 1,1,1,2-tetrachloro-	630-20-6
1,1,2,2-Tetrachloroethane	Ethane, 1,1,2,2-tetrachloro-	79-34-5
Tetrachloroethylene	Ethene, tetrachloro-	127-18-4
2,3,4,6-Tetrachlorophenol	Phenol, 2,3,4,6-tetrachloro-	58-90-2
Tetraethyldithiopyrophosphate	Thiodiphosphoric acid, tetraethylester	3689-24-5
Tetraethyl lead	Plumbane, tetraethyl-	78-00-2
Tetraethylpyrophosphate	Diphosphoric acid, tetraethyl ester	107-49-3
Tetranitromethane	Methane, tetranitro-	509-14-8
Thallium & compounds N.O.S.*	Thallium	7440-28-0
Thallic oxide	Thallium (III) oxide	1314-32-5
Thallium (I) acetate	Acetic acid, thallium(1+) salt	563-68-8
Thallium (I) carbonate	Carbonic acid, dithallium (1+)salt	6533-73-9
Thallium (I) chloride	Thallium chloride	7791-12-0
Thallium (I) nitrate	Nitric acid, thallium (1+) salt	10102-45-1
Thallium selenite	Thallium selenide	12039-52-0
Thallium (I) sulfate	Sulfuric acid, thallium salt	10031-59-1
Thioacetamide	Ethanethioamide	62-55-5
Thiofanox	2-Butanone, 3,3-dimethyl-1-(methylthio)-O-[(methylamino)carbonyl]oxime	39196-18-4
Thiomethanol	Methanethiol	74-93-1
Thiophenol	Benzenethiol	108-98-5
Thiosemicarbazide	Hydrazinecarbothioamide	79-19-6
Thiourea	Same	62-56-6
Thiram	Thioperoxydicarbonic diamide, tetramethyl-	137-26-8
Toluene	Benzene, methyl-	108-88-3
Toluenediamine	Benzenediamine, ar-methyl-	25376-45-8
2,4-Toluenediamine	1,3-Benzenediamine, 4-methyl-	95-80-7
2,6-Toluenediamine	1,3-Benzenediamine, 2-methyl-	823-40-5
3,4-Toluenediamine	1,2-Benzenediamine, 4-methyl-	496-72-0
Toluene diisocyanate	Benzene, 2,4 diisocyanato-1-methyl-	584-84-9
p-Toluidine	Benzenamine, 4-methyl-	106-49-0
o-Toluidine	Benzenamine, 2-methyl-	95-53-4
o-Toluidine hydrochloride	Benzenamine, 2-methyl, hydrochloride	636-21-5
Toxaphene	Same	8001-35-2
1,2,4-Trichlorobenzene	Benzene, 1,2,4-trichloro-	120-82-1
1,1,2-Trichloroethane	Ethane, 1,1,2-trichloro-	79-00-5
Trichloroethylene	Ethene, trichloro-	79-01-6
Trichloromethanethiol	Methanethiol, trichloro-	75-70-7

Trichloromonofluoromethane	Methane, trichlorofluoro-	75-69-4
2,4,5-Trichlorophenol	Phenol, 2,4,5-trichloro-	95-95-4
2,4,6-Trichlorophenol	Phenol, 2,4,6-trichloro-	88-06-2
2,4,5-T,salts and esters	Acetic acid,(2,4,5-trichlorophenoxy)-, salts and esters	93-76-5
Trichloropropane, N.O.S.*	.....	.....
1,2,3-Trichloropropane	Propane, 1,2,3-trichloro-	96-18-4
O,O,O-Triethylphosphorothioate	Phosphorothioic acid, O,O,O-triethyl ester	126-68-1
sym-Trinitrobenzene	Benzene, 1,3,5-trinitro-	99-35-4
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
Trypan blue	2,7-Naphthalendisulfonic acid,3,3'-[(3,3'-dimethyl[1,1'-biphenyl]-4,4'-diyl)bis(azo)]bis[5-amino-4-hydroxy-,tetrasodium salt	72-57-1
Undecamethylenediamine, N,N'-bis-(2-chloro benzyl)-,dihydrochloride	Same	2056-25-9
Uracil mustard	2,4(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl) amino]-	66-75-1
Vanadium pentoxide	Vanadium oxide V_2O_5	1314-62-1
Vinyl chloride	Ethene, chloro-	75-01-4
Warfarin	2 H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-	81-81-2
Zinc cyanide	Same	557-21-1
Zinc phosphide	Zinc phosphide P_2Zn_3	1314-84-7

*The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.

APPENDIX III

Appendix III

Hazardous wastes which are Discarded Commercial Chemical Products or Off-Specification Batches of Commercial Chemical Products or Spill Residues of Either.

The following hazardous wastes are referred to in Section 7-213.

Hazardous Waste Number	Chemical Abstracts Number	Substance
U001	75-07-0	Acetaldehyde (I)
U034	75-87-6	Acetaldehyde, trichloro- (T)
U187	62-44-2	Acetamide, N-(4-ethoxyphenyl)- (T)
U005	53-96-3	Acetamide, N-9H-fluoren-2-yl- (T)
U240	94-75-7	Acetic acid, (2,4-dichlorophenoxy)-, salts & esters (T)
U112	141-78-6	Acetic acid, ethyl ester (I)
U144	301-04-2	Acetic acid, lead salt (T)
U214	563-68-8	Acetic acid, thallium (1+) salt (T)
see F027	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)- (T)
U002	67-64-1	Acetone (I)
U003	75-05-8	Acetonitrile (I,T)
U004	98-86-2	Acetophenone (T)
U005	53-96-3	2-Acetylaminofluorene (T)
U006	75-36-5	Acetyl chloride (C,R,T)
U007	79-06-1	Acrylamide (T)
U008	79-10-7	Acrylic acid (I)
U009	107-13-1	Acrylonitrile (T)
U011	61-82-5	Amitrole (T)
U012	62-53-3	Aniline (I,T)
U136	75-60-5	Arsinic acid, dimethyl-
U014	492-80-8	Auramine (T)
U015	115-02-6	Azaserine (T)
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-, (T)
U157	50-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl- (T)
U016	225-51-4	3,4-Benzacridine (T)
U017	98-87-3	Benzal chloride (T)
U192	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-diethyl- 2-propynyl)- (T)
U018	56-55-3	Benz[a]anthracene (T)
U094	57-97-6	Benz[a]anthracene, 7,12-dimethyl- (T)
U012	62-53-3	Benzenamine (I,T)
U014	492-80-8	Benzenamine, 4,4'-carbonimidoylbis[N,N-dimethyl- (T)
U049	3165-93-3	Benzenamine, 4-chloro-2-methyl- (T)

U093	60-11-7	Benzenamine, N,N-dimethyl-4-(phenylazo)- (T)
U328	95-53-4	Benzenamine, 2-methyl- (T)
U353	106-49-0	Benzenamine, 4-methyl- (T)
U158	101-14-4	Benzenamine, 4,4'-methylenebis[2-chloro- (T)
U222	636-21-5	Benzenamine, 2-methyl-, hydrochloride (T)
U181	99-55-8	Benzenamine, 2-methyl-5-nitro- (T)
U019	71-43-2	Benzene (T)
U038	510-15-6	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy, ethyl ester (T)
U030	101-55-3	Benzene, 1-bromo-4-phenoxy- (T)
U035	305-03-3	Benzenebutanoic acid, 4-[bis(2-chloroethyl)-amino]- (T)
U037	108-90-7	Benzene, chloro- (T)
U221	25376-45-8	Benzenediamine, ar-methyl- (T)
U028	117-81-7	1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester (T)
U069	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester (T)
U088	84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester (T)
U102	131-11-3	1,2-Benzenedicarboxylic acid, dimethyl ester(T)
U107	117-84-0	1,2-Benzenedicarboxylic acid, di-n-octyl ester (T)
U070	95-50-1	Benzene, 1,2-dichloro- (T)
U071	541-73-1	Benzene, 1,3-dichloro- (T)
U072	106-46-7	Benzene, 1,4-dichloro- (T)
U060	72-54-8	Benzene, 1, 1'-(2,2-dichloroethylidene)bis-[4-chloro- (T)
U017	98-87-3	Benzene, (dichloromethyl)- (T)
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 (T)
U127	118-74-1	Benzene, hexachloro- (T)
U056	110-82-7	Benzene, hexahydro- (I)
U220	108-88-3	Benzene, methyl- (T)
U105	121-14-2	Benzene, 1-methyl-2,4-dinitro- (T)
U106	606-20-2	Benzene, 2-methyl-1,3-dinitro- (T)
U055	98-82-8	Benzene, (1-methylethyl)-(I)
U169	98-95-3	Benzene, nitro- (I,T)
U183	608-93-5	Benzene, pentachloro- (T)
U185	82-68-8	Benzene, pentachloronitro- (T)
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- (T)
U061	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene)-bis[4-chloro- (T)
U247	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene)-[4-methoxy- (T)
U023	98-07-7	Benzene, (trichloromethyl)- (C,R,T)
U234	99-35-4	Benzene, 1,3,5-trinitro- (R,T)
U021	92-87-5	Benzidine (T)
U202	*81-07-2	1,2-Benzisothiazol-3-(2H)-one, 1,1-dioxide and salts (T)
U203	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)- (T)
U141	120-58-1	1,3-Benzodioxole, 5-(1-propenyl)- (T)
U090	94-58-6	1,3-Benzodioxole, 5-propyl- (T)

U064	189-55-9	Benzo[rst]pentaphene (T)
U248	81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenyl-butyl)-, & salts, when present at concentrations of 0.3% or less
U022	50-32-8	Benzo[a]pyrene (T)
U197	106-51-4	p-Benzoquinone (T)
U023	98-07-7	Benzotrichloride (C,R,T)
U085	1464-53-5	2,2'-Bioxirane (I,T)
U021	92-87-5	[1,1'-Biphenyl]-4,4'diamine (T)
U073	91-94-1	[1,1-Biphenyl]-4,4'-diamine, 3,3'-dichloro- (T)
U091	119-90-4	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethoxy- (T)
U095	119-93-7	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-(T)
U027	39638-32-9	Bis(2-chloroisopropyl) ether (T)
U024	111-91-1	Bis(2-chloromethoxy) ethane (T)
U028	117-81-7	Bis(2-ethylhexyl) phthalate (T)
U225	75-25-2	Bromoform (T)
U030	101-55-3	4-Bromophenyl phenyl ether (T)
U128	87-68-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro- (T)
U172	924-16-3	1-Butanamine, N-butyl-N-nitroso- (T)
U035	305-03-3	Butanoic acid, 4[bis(2-chloroethyl)amino]-benzene- (T)
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 (T)
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-1-pyrrolizin-1-yl ester, [1S-[lalpha(Z), 7(2S, 3R), 7aalpha]]- (T)
U031	71-36-3	n-Butyl alcohol (I)
U136	75-60-5	Cacodylic acid (T)
U032	13765-19-0	Calcium chromate (T)
U238	51-79-6	Carbamic acid, ethyl ester (T)
U178	615-53-2	Carbamic acid, methylnitroso-, ethyl ester (T)
U097	79-44-7	Carbamic chloride, dimethyl- (T)
U114	*111-54-6	Carbamodithioic acid, 1,2-ethanediylbis-, salts and esters (T)
U062	2303-16-4	Carbamothioic acid, bis(1-methylethyl)-S-(2,3-dichloro-2-propenyl) ester (T)
U215	6533-73-9	Carbonic acid, dithallium(1+) salt (T)
U033	353-50-4	Carbonic difluoride (T)
U156	79-22-1	Carbonochloridic acid, methyl ester (I,T)
U033	353-50-4	Carbon oxyfluoride (R,T)
U211	56-23-5	Carbon tetrachloride (T)
U034	75-87-6	Chloral (T)
U035	305-03-3	Chlorambucil (T)
U036	12789-03-6	Chlordane (T)
U026	494-03-1	Chlornaphazine (T)

U037	108-90-7	Chlorobenzene (T)
U038	510-15-6	Chlorobenzilate
U039	59-50-7	p-Chloro-m-cresol (T)
U041	106-89-8	1-Chloro-2,3-epoxypropane (T)
U042	110-75-8	2-Chloroethyl vinyl ether (T)
U044	67-66-3	Chloroform (T)
U046	107-30-2	Chloromethyl methyl ether (T)
U047	91-58-7	beta-Chloronaphthalene (T)
U048	95-57-8	o-Chlorophenol (T)
U049	3165-93-3	4-Chloro-o-toluidine, hydrochloride (T)
U032	13765-19-0	Chromic acid, calcium salt (T)
U050	218-01-9	Chrysene (T)
U051	8021-39-4	Creosote (T)
U052	1319-77-3	Cresols (Cresylic acid) (T)
U053	4170-30-3	Crotonaldehyde (T)
U055	98-82-8	Cumene (I)
U246	506-68-3	Cyanogen bromide (T)
U197	106-51-4	2,5-Cyclohexadiene-1, 4-dione (T)
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-(T)
U058	50-18-0	Cyclophosphamide (T)
U240	*94-75-7	2,4-D, salts and esters (T)
U059	20830-81-3	Daunomycin (T)
U060	72-54-8	DDD (T)
U061	50-29-3	DDT (T)
U062	2303-16-4	Diallate (T)
U063	53-70-3	Dibenz[a,h]anthracene (T)
U064	189-55-9	Dibenzo[a,i]pyrene (T)
U066	96-12-8	1,2-Dibromo-3-chloropropane (T)
U069	84-74-2	Dibutyl phthalate (T)
U070	95-50-1	o-Dichlorobenzene (T)
U071	541-73-1	m-Dichlorobenzene (T)
U072	106-46-7	p-Dichlorobenzene (T)
U073	91-94-1	3,3'-Dichlorobenzidine (T)
U074	764-41-0	1,4-Dichloro-2-butene (I,T)
U075	75-71-8	Dichlorodifluoromethane (T)
U078	75-35-4	1,1-Dichloroethylene (T)
U079	156-60-5	1,2-Dichloroethylene (T)
U025	111-44-1	Dichloroethyl ether (T)
U027	108-60-1	Dichloroisopropyl ether
U024	111-91-1	Dichloromethoxy ethane
U081	120-83-2	2,4-Dichlorophenol (T)
U082	87-65-0	2,6-Dichlorophenol (T)
U240	*94-75-7	2,4-Dichlorophenoxyacetic acid, salts and esters (T)

U083	78-87-5	1,2-Dichloropropane (T)
U084	542-75-6	1,3-Dichloropropene (T)
U085	1464-53-5	1,2:3,4-Diepoxybutane (I,T)
U108	123-91-1	1,4-Diethyleneoxide (T)
U028	117-81-7	Diethylhexyl phthalate
U086	1615-80-1	N,N-Diethylhydrazine (T)
U087	3288-58-2	O,O-Diethyl-S-methyl-dithiophosphate (T)
U088	84-66-2	Diethyl phthalate (T)
U089	56-53-1	Diethylstilbestrol (T)
U148	123-33-1	1,2-Dihydro-3,6-pyridazinedione (T)
U090	94-58-6	Dihydrosafrole (T)
U091	119-90-4	3,3'-Dimethoxybenzidine (T)
U092	124-40-3	Dimethylamine (I)
U093	60-11-7	Dimethylaminoazobenzene (T)
U094	57-97-6	7,12-Dimethylbenz[a]anthracene (T)
U095	119-93-7	3,3'-Dimethylbenzidine (T)
U096	80-15-9	alpha,alpha-Dimethylbenzylhydroperoxide (R)
U097	79-44-7	Dimethylcarbamoyl chloride (T)
U098	57-14-7	1,1-Dimethylhydrazine (T)
U099	540-73-8	1,2-Dimethylhydrazine (T)
U101	105-67-9	2,4-Dimethylphenol (T)
U102	131-11-3	Dimethyl phthalate (T)
U103	77-78-1	Dimethyl sulfate (T)
U105	121-14-2	2,4-Dinitrotoluene (T)
U106	606-20-2	2,6-Dinitrotoluene (T)
U107	117-84-0	Di-n-octyl phthalate (T)
U108	123-91-1	1,4-Dioxane (T)
U109	122-66-7	1,2-Diphenylhydrazine (T)
U110	142-84-7	Dipropylamine (I)
U111	621-64-7	Di-n-propylnitrosamine (T)
U041	106-89-8	Epichlorohydrin
U001	75-07-0	Ethanal (I)
U174	55-18-5	Ethanamine, N-ethyl-N-nitroso- (T)
U155	91-80-5	1,2-Ethanediamine, N,N-dimethyl-N'-2-pyridinyl-N'-(2-thienylmethyl)- (T)
U067	106-93-4	Ethane, 1,2-dibromo- (T)
U076	75-34-3	Ethane, 1,1-dichloro- (T)
U077	107-06-2	Ethane, 1,2-dichloro- (T)
U131	67-72-1	Ethane, hexachloro- (T)
U024	111-91-1	Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro- (T)
U117	60-29-7	Ethane, 1,1'-oxybis-(I)
U025	111-44-4	Ethane, 1,1'-oxybis[2-chloro- (T)
U184	76-01-7	Ethane, pentachloro- (T)
U208	630-20-6	Ethane, 1,1,1,2-tetrachloro- (T)
U209	79-34-5	Ethane, 1,1,2,2-tetrachloro- (T)
U218	62-55-5	Ethanethioamide (T)
U226	71-55-6	Ethane, 1,1,1-trichloro-

U227	79-00-5	Ethane, 1,1,2-trichloro- (T)
U359	110-80-5	Ethanol, 2-ethoxy- (T)
U173	1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis- (T)
U004	98-86-2	Ethanone, 1-phenyl- (T)
U043	75-01-4	Ethene, chloro- (T)
U042	110-75-8	Ethene, (2-chloroethoxy)- (T)
U078	75-35-4	Ethene, 1,1-dichloro- (T)
U079	156-60-5	Ethene, 1,2-dichloro-,(E)- (T)
U210	127-18-4	Ethene, tetrachloro- (T)
U228	79-01-6	Ethene, trichloro- (T)
U112	141-78-6	Ethyl acetate (I)
U113	140-88-5	Ethyl acrylate (I)
U238	51-79-6	Ethyl carbamate (T)
U038	510-15-6	Ethyl 4,4'-dichlorobenzilate (T)
U114	111-54-6	Ethylenebisdithiocarbamic acid, salts and esters (T)
U067	106-93-4	Ethylene dibromide (T)
U077	107-06-2	Ethylene dichloride (T)
U359	110-80-5	Ethylene glycol monoethyl ether (T)
U115	75-21-8	Ethylene oxide (I,T)
U116	96-45-7	Ethylene thiourea (T)
U117	60-29-7	Ethyl ether (I)
U076	75-34-3	Ethylidene dichloride (T)
U118	97-63-2	Ethyl methacrylate (T)
U119	62-50-0	Ethylmethanesulfonate (T)
U120	206-44-0	Fluoranthene (T)
U122	50-00-0	Formaldehyde (T)
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	2,5-Furandione (T)
U213	109-99-9	Furan, tetrahydro- (I)
U125	98-01-1	Furfural (I)
U124	110-00-9	Furfuran (I)
U206	18883-66-4	D-Glucopyranose, 2-deoxy-2(3-methyl-3-nitrosoureido)- (T)
U126	765-34-4	Glycidylaldehyde (T)
U163	70-25-7	Guanidine, N-methyl-N'-nitro-N-nitroso- (T)
U127	118-74-1	Hexachlorobenzene (T)
U128	87-68-3	Hexachlorobutadiene (T)
U129	58-88-9	Hexachlorocyclohexane (gamma isomer) (T)
U130	77-47-4	Hexachlorocyclopentadiene (T)
U131	67-72-1	Hexachloroethane (T)
U132	70-30-4	Hexachlorphene (T)
U243	1888-71-7	Hexachloropropene (T)
U133	302-01-2	Hydrazine (R,T)
U086	1615-80-1	Hydrazine, 1,2-diethyl- (T)
U098	57-14-7	Hydrazine, 1,1-dimethyl- (T)
U099	540-73-8	Hydrazine, 1,2-dimethyl- (T)

U109	122-66-7	Hydrazine, 1,2-diphenyl- (T)
U134	7664-39-3	Hydrofluoric acid (C,T)
U134	7664-39-3	Hydrogen fluoride (C,T)
U135	7783-06-4	Hydrogen sulfide (T)
U096	80-15-9	Hydroperoxide, 1-methyl-1-phenylethyl- (R)
U136	75-60-5	Hydroxydimethylarsine oxide (T)
U116	96-45-7	2-Imidazolidinethione (T)
U137	193-39-5	Indeno[1,2,3cd]pyrene (T)
U190	85-44-9	1,3-Isobenzofurandione (T)
U140	78-83-1	Isobutyl alcohol (I,T)
U141	120-58-1	Isosafrole (T)
U142	143-50-0	Kepone (T)
U143	303-34-4	Lasiocarpine (T)
U144	301-04-2	Lead acetate (T)
U146	1335-32-6	Lead, bis(acetato-O)tetrahydroxytri- (T)
U145	7446-27-7	Lead phosphate (T)
U146	1335-32-6	Lead subacetate (T)
U129	58-89-9	Lindane (T)
U163	70-25-7	MNNG
U147	108-31-6	Maleic anhydride (T)
U148	123-33-1	Maleic hydrazide (T)
U149	109-77-3	Malononitrile (T)
U150	148-82-3	Melphalan (T)
U151	7439-97-6	Mercury (T)
U152	126-98-7	Methacrylonitrile (I,T)
U092	124-40-3	Methanamine, N-methyl- (I)
U029	74-83-9	Methane, bromo- (T)
U045	74-87-3	Methane, chloro- (I,T)
U046	107-30-2	Methane, chloromethoxy- (T)
U068	74-95-3	Methane, dibromo- (T)
U080	75-09-2	Methane, dichloro- (T)
U075	75-71-8	Methane, dichlorodifluoro- (T)
U138	74-88-4	Methane, iodo- (T)
U119	62-50-0	Methanesulfonic acid, ethyl ester (T)
U211	56-23-5	Methane, tetrachloro- (T)
U153	74-93-1	Methanethiol (I,T)
U225	75-25-2	Methane, tribromo- (T)
U044	67-66-3	Methane, trichloro- (T)
U121	75-69-4	Methane, trichlorofluoro- (T)
U123	64-18-6	Methanoic acid (C,T)
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 (T)
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- (T)
U247	72-43-5	Methoxychlor (T)

U154	67-56-1	Methyl alcohol (I)
U029	74-83-9	Methyl bromide (T)
U186	504-60-9	1-Methylbutadiene (I)
U045	74-87-3	Methyl chloride (I,T)
U156	79-22-1	Methylchlorocarbonate (I,T)
U226	71-55-6	Methylchloroform (T)
U157	56-49-5	3-Methylcholanthrene (T)
U158	101-14-4	4,4'-Methylenebis(2-chloroaniline) (T)
U068	74-95-3	Methylene bromide (T)
U080	75-09-2	Methylene chloride (T)
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 (T)
U161	108-10-1	Methyl isobutyl ketone (I)
U162	80-62-6	Methyl methacrylate (I,T)
U163	70-25-7	N-Methyl-N'-nitro-N-nitrosoguanidine (T)
U161	108-10-1	4-Methyl-2-pentanone (I)
U164	56-04-2	Methylthiouracil (T)
U010	50-07-7	Mitomycin C (T)
U059	20830-81-3	5,12-Naphthacenedione, (8S-cis)-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- (T)
U165	91-20-3	Naphthalene (T)
U047	91-58-7	Naphthalene, 2-chloro- (T)
U166	130-15-4	1,4-Naphthalenedione (T)
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 (T)
U166	130-15-4	1,4-Naphthoquinone (T)
U167	134-32-7	alpha-Naphthylamine (T)
U168	91-59-8	beta-Naphthylamine (T)
U026	494-03-1	2-Naphthylamine, N,N'-bis(2-chloroethyl)- (T)
U167	134-32-7	1-Naphthylenamine (T)
U168	91-59-8	2-Naphthylenamine (T)
U217	10102-45-1	Nitric acid, thallium(1+) salt (T)
U169	98-95-3	Nitrobenzene (I,T)
U170	100-02-7	p-Nitrophenol (T)
U171	79-46-9	2-Nitropropane (I,T)
U172	924-16-3	N-Nitrosodi-n-butylamine (T)
U173	1116-54-7	N-Nitrosodiethanolamine (T)
U174	55-18-5	N-Nitrosodiethylamine (T)
U111	621-64-7	N-Nitrosodi-n-propylamine (T)
U176	759-73-9	N-Nitroso-N-ethylurea (T)
U177	684-93-5	N-Nitroso-N-methylurea (T)
U178	615-53-2	N-Nitroso-N-methylurethane (T)
U179	100-75-4	N-Nitrosopiperidine (T)
U180	930-55-2	N-Nitrosopyrrolidine (T)

U181	99-55-8	5-Nitro-o-toluidine (T)
U193	1120-71-4	1,2-Oxathiolane, 2,2-dioxide (T)
U058	50-18-0	2H-1,3,2-Oxazaphosphorine-2-amine, N,N-bis (2-chloroethyl)tetrahydro-, 2-oxide (T)
U115	75-21-8	Oxirane (I,T)
U126	765-34-4	Oxiranecarboxyaldehyde (T)
U041	106-89-8	Oxirane, (chloromethyl)- (T)
U182	123-63-7	Paraldehyde (T)
U183	608-93-5	Pentachlorobenzene (T)
U184	76-01-7	Pentachloroethane (T)
U185	82-68-8	Pentachloronitrobenzene (PCNB) (T)
see F027	87-86-5	Pentachlorophenol (T)
U161	108-10-1	Pentanol, 4-methyl-
U186	504-60-9	1,3-Pentadiene (I)
U187	62-44-2	Phenacetin (T)
U188	108-95-2	Phenol (T)
U048	95-57-8	Phenol, 2-chloro- (T)
U039	59-50-7	Phenol, 4-chloro-3-methyl- (T)
U081	120-83-2	Phenol, 2,4-dichloro- (T)
U082	87-65-0	Phenol, 2,6-dichloro- (T)
U089	56-53-1	Phenol, 4,4'-(1,2-diethyl-1,2-ethenediyl) bis-, (E)- (T)
U101	105-67-9	Phenol, 2,4-dimethyl- (T)
U052	1319-77-3	Phenol, methyl- (T)
U132	70-30-4	Phenol, 2,2'-methylenebis[3,4,6-trichloro- (T)
U170	100-02-7	Phenol, 4-nitro- (T)
see F027	87-86-5	Phenol, pentachloro- (T)
see F027	58-90-2	Phenol, 2,3,4,6-tetrachloro- (T)
see F027	95-94-4	Phenol, 2,4,5-trichloro- (T)
see F027	88-06-2	Phenol, 2,4,6-trichloro- (T)
U150	148-82-3	L-Phenylalanine, 4-[bis(2-chloroethyl)-amino]- (T)
U137	193-39-5	1,10-(1,2 Phenylene)pyrene (T)
U145	7446-27-7	Phosphoric acid, lead salt (T)
U087	3288-58-2	Phosphorodithioic acid, O,O-diethyl-, S-methyl-, ester (T)
U189	108-95-2	Phosphorus sulfide (R)
U190	85-44-9	Phthalic anhydride (T)
U191	109-06-8	2-Picoline (T)
U179	100-75-4	Piperidine, 1-nitroso- (T)
U192	23950-58-5	Pronamide (T)
U194	107-10-8	1-Propanamine (I,T)
U111	621-64-7	1-Propanamine, N-nitroso-N-propyl- (T)
U110	142-84-7	1-Propanamine, N-propyl- (I)
U066	96-12-8	Propane, 1,2-dibromo-3-chloro- (T)
U083	78-87-5	Propane, 1,2-dichloro-
U149	109-77-3	Propanedinitrile (T)
U171	79-46-9	Propane, 2-nitro- (I,T)
U027	39638-32-9	Propane, 2,2'-oxybis[2-chloro- (T)
U193	1120-71-4	1,3-Propane sulfone (T)

U235	126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1) (T)
U140	78-83-1	1-Propanol, 2-methyl- (I,T)
U002	67-64-1	2-Propanone (I)
U084	542-75-6	1-Propane, 1,3-dichloro- (T)
U152	126-98-7	2-Propanenitrile, 2-methyl- (I,T)
U007	79-06-1	2-Propenamide (T)
U243	1888-71-7	1-Propene, hexachloro- (T)
U009	107-13-1	2-Propenenitrile (T)
U008	79-10-7	2-Propenoic acid (I)
U113	140-88-5	2-Propenoic acid, ethyl ester (I)
U118	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester (T)
U162	80-66-2	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
see F027	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)- (T)
U194	107-10-8	n-Propylamine (I,T)
U083	78-87-5	Propylene dichloride (T)
U148	123-33-1	3,6-Pyridazinedione, 1,2-dihydro- (T)
U196	110-86-1	Pyridine (T)
U155	91-80-5	Pyridine, 2-[(2-dimethylamino)ethyl]-2-phenylamino (T)
U191	109-06-8	Pyridine, 2-methyl- (T)
U237	66-75-1	2,4(1H,3H)-Pyrimidinedione, 5-[bis(2-chloroethyl) amino]- (T)
U164	56-04-2	4-(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo- (T)
U180	930-55-2	Pyrrolidine, 1-nitroso- (T)
U200	50-55-5	Reserpine (T)
U201	108-46-3	Resorcinol (T)
U202	81-07-2	Saccharin and salts (T)
U203	94-59-7	Safrole (T)
U204	7783-00-8	Selenious acid (T)
U204	7783-00-8	Selenium dioxide (T)
U205	7446-34-6	Selenium sulfide (R,T)
U015	115-02-6	L-Serine, diazoacetate (ester) (T)
see F027	93-72-1	Silvex (T)
U206	18883-66-4	Streptozotocin (T)
U103	77-78-1	Sulfuric acid, dimethyl ester (T)
U189	1314-80-3	Sulfur phosphide (R)
see F027	93-76-5	2,4,5-T (T)
U207	95-94-3	1,2,4,5-Tetrachlorobenzene (T)
U208	630-20-6	1,1,1,2-Tetrachloroethane (T)
U209	79-34-5	1,1,2,2-Tetrachloroethane (T)
U210	127-18-4	Tetrachloroethylene (T)
see F027	58-90-2	2,3,4,6-Tetrachlorophenol (T)
U213	109-99-9	Tetrahydrofuran (I)
U214	15843-14-8	Thallium(I) acetate (T)
U215	6533-73-9	Thallium(I) carbonate (T)
U216	7791-12-0	Thallium chloride (T)
U217	10102-45-1	Thallium(I) nitrate (T)
U218	62-55-5	Thioacetamide (T)

U153	74-93-1	Thiomethanol (I,T)
U244	137-26-8	Thioperoxydicarbonic diamide, tetramethyl- (T)
U219	62-56-6	Thiourea (T)
U244	137-26-8	Thiuram (T)
U220	108-88-3	Toluene (T)
U221	25376-45-8	Toluenediamine (T)
U223	26471-62-5	Toluene diisocyanate (R,T)
U328	95-53-4	o-Toluidine (T)
U353	106-49-0	p-Toluidine (T)
U222	636-21-5	o-Toluidine hydrochloride (T)
U011	61-82-5	1H-1,2,4-Triazol-3-amine (T)
U226	71-55-6	1,1,1-Trichloroethane (T)
U227	79-00-5	1,1,2-Trichloroethane (T)
U228	79-01-6	Trichloroethylene (T)
U121	75-69-4	Trichloromonofluoromethane (T)
see F027	95-95-4	2,4,5-Trichlorophenol (T)
see F027	88-06-2	2,4,6-Trichlorophenol (T)
U232	93-76-5	2,4,5-Trichlorophenoxyacetic acid, esters and salts (T)
U233	93-72-1	2,4,5-Trichlorophenoxypropionic acid, esters and salts (T)
U234	99-35-4	sym-Trinitrobenzene (R,T)
U182	123-63-7	1,3,5-Trioxane, 2,4,6-trimethyl- (T)
U235	126-72-7	Tris (2,3-dibromopropyl) phosphate (T)
U236	72-57-1	Trypan blue (T)
U237	66-75-1	Uracil, 5 [bis(2-chloroethyl)-amino]- (T)
U237	66-75-1	Uracil mustard (T)
U176	759-73-9	Urea, N-ethyl-N-nitroso- (T)
U177	684-93-5	Urea, N-methyl-N-nitroso- (T)
U043	75-01-4	Vinyl chloride (T)
U248	81-81-2	Warfarin, when present at concentrations of 0.3% or less (T)
U239	1330-20-7	Xylene (I)
U200	50-55-5	Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester (T)
U249	1314-84-7	Zinc phosphide, when present at concentrations of 10% or less (T)

*CAS Number given for parent compound only.

APPENDIX IV

ACUTELY HAZARDOUS WASTES

Appendix IV
Acutely Hazardous Wastes

The following list of acutely hazardous wastes is referred to in section 7-214.

Hazardous Waste Number	Chemical Abstracts Number	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
P066	16752-77-5	Acetimidic acid, N-[(methylcarbamoyl)oxy]-thio-, methyl ester
P001	81-81-2	3-(alpha-Acetonyl-benzyl)-4-hydroxycoumarin and salts
P002	591-08-2	1-Acetyl-2-thiourea
P003	107-02-8	Acrolein
P070	116-06-3	Aldicarb
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_3
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-
P054	151-56-4	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
P001	*81-81-2	2H-1-Benzopyran-2-one, 4-hydroxy-3-(3-oxo-1-phenylbutyl)-, and salts
P028	100-44-7	Benzyl chloride

P015	7440-41-7	Beryllium
P016	542-88-1	Bis(chloromethyl)ether
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
P022	75-15-0	Carbon bisulfide
P022	75-15-0	Carbon disulfide
P095	75-44-5	Carbonic dichloride
P023	107-20-0	Chloroacetaldehyde
P024	106-47-8	p-Chloroaniline
P026	5344-82-1	1-(o-Chlorophenyl)thiourea
P027	542-76-7	3-Chloroproprionitrile
P029	544-92-3	Copper cyanide
P030	----------	Cyanides (soluble cyanide salts), not otherwise specified
P031	460-19-5	Cyanogen
P033	506-77-4	Cyanogen chloride
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	Diisopropyl fluorophosphate (DFP)
P004	309-00-2	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)-
P060	465-73-6	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)-
P037	60-57-1	2,7:3,6-Dimethanonaphth[2,3b]oxirane, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)-
P051	72-20-8	2,7:3,6-Dimethanonaphth[2,3b]oxirane, octahydro-, (1aalpha,2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-
P044	60-51-5	Dimethoate
P045	39196-18-4	3,3-Dimethyl-1-(methylthio)-2-butanone, O-[(methylamino)carbonyl] oxime
P046	122-09-8	alpha, alpha-Dimethylphenethylamine
P047	*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	2,4-Dithiobiuret
P050	115-29-7	Endosulfan
P088	145-73-3	Endothal
P051	72-20-8	Endrin
P042	51-43-4	Epinephrine
P031	460-19-5	Ethanedinitrile
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	Fulminic acid, mercury(2+)salt (R,T)
P059	76-44-8	Heptachlor
P060	465-73-6	Hexachlorohexahydro-endo, endo-dimethanonaphthalene
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
P064	624-83-9	Isocyanic acid, methyl ester
P060	465-73-6	Isodrin
P007	2763-96-4	3(2H)-Isoxazolone, 5-(aminomethyl)-
P092	62-38-4	Mercury, (acetato-O)phenyl-
P065	628-86-4	Mercury fulminate (R,T)
P082	62-75-9	Methamine, 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-
P050	115-29-7	6,9-Methano-2,4,3-benzodioxathiepen, 6,7,8,9,10,10-hexachloro-1,5,5a,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-
P066	16752-77-5	Methomyl
P067	75-55-8	2-Methylaziridine
P068	60-34-4	Methyl hydrazine
P064	624-83-9	Methyl isocyanate
P069	75-86-5	2-Methyllactonitrile
P071	298-00-0	Methyl parathion
P072	86-88-4	alpha-Naphthylthiourea
P073	13463-39-3	Nickel carbonyl
P073	13463-39-3	Nickel carbonyl, (T-4)-
P074	557-19-7	Nickel cyanide

P075	*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 NO2
P081	55-63-0	Nitroglycerine (R)
P082	62-75-9	N-Nitrosodimethylamine
P084	4549-40-0	N-Nitrosomethylvinylamine
P074	557-19-7	Nickel cyanide
P085	152-16-9	Octamethylpyrophosphoramide
P087	20816-12-0	Osmium oxide
P087	20816-12-0	Osmium tetroxide
P088	145-73-3	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
P089	56-38-2	Parathion
P034	131-89-5	Phenol, 2-cyclohexyl-4,6-dinitro-
P048	51-28-5	Phenol, 2,4-dinitro-
P047	*534-52-1	Phenol, 2-methyl-4,6-dinitro- and salts
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	Phosphorofluoridic 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
P110	78-00-2	Plumbane, tetraethyl-
P098	151-50-8	Potassium cyanide
P099	506-61-6	Potassium silver cyanide
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	591-08-2	2-Propyn-1-ol
P008	504-24-5	Pyridinamine
P075	*54-11-5	Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts
P111	107-49-3	Pyrophosphoric acid, tetraethyl ester
P114	12039-52-0	Selenious acid, dithallium(1+) salt
P103	630-10-4	Selenourea
P104	506-64-9	Silver cyanide
P105	26628-22-8	Sodium azide
P106	143-33-9	Sodium cyanide
P108	*57-24-9	Strychnidin-10-one, and salts
P018	357-57-3	Strychnidin-10-one, 2,3-dimethoxy-
P108	*57-24-9	Strychine and salts
P115	10031-59-1	Sulfuric acid, thallium(I) salt
P109	3689-24-5	Tetraethyldithiopyrophosphate
P110	78-00-2	Tetraethyl lead
P111	107-49-3	Tetraethylpyrophosphate
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(III) oxide
P114	12039-52-0	Thallium(I) selenide
P115	10031-59-1	Thallium(I) sulfate
P109	3689-24-5	Thiodiphosphoric acid, tetraethyl ester
P045	39196-18-4	Thiofanox
P049	541-53-7	Thioimidodicarbonic diamide
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-
P123	8001-35-2	Toxaphene
P118	75-70-7	Trichloromethanethiol
P119	7803-55-6	Vanadic acid, ammonium salt
P120	1314-62-1	Vanadium(V) oxide
P084	4549-40-0	Vinylamine, N-methyl-N-nitroso-
P001	81-81-2	Warfarin
P121	557-21-1	Zinc cyanide
P122	1314-84-7	Zinc phosphide (R,T)

*CAS Number for parent compound only.

APPENDIX V

SAMPLING AND ANALYSIS METHODOLOGIES

Appendix V
Sampling and Analysis Methodology

A. 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)

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

Containerized liquid wastes -- "COLIWASA" described in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," 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."

B. Procedures For Determining Hazardous Waste Characteristics

Test for Ignitability

(1) The flash point of liquids shall be determined by any of the following methods:

(a) A Pensky-Martens Closed Cup Tester, using the test methods specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846; or

(b) A Setaflash Closed Cup Tester, using the test methods specified in "Test Methods for Evaluating Solid Waste,

Physical/Chemical Methods," EPA Publication SW-846.

(c) An equivalent test method approved by the Administrator of EPA and the Secretary in accordance with Section 7-218(2).

(2) Compressed gas shall be characterized as ignitable if any of the following occurs:

(a) Either a mixture of 13 percent or less (by volume) with air, forms a flammable mixture or the flammable range with air is wider than 12 percent regardless of the lower limit. These limits shall be determined at atmospheric temperature and pressure using sampling methods and test procedures acceptable to the U.S. Bureau of Explosives;

(b) Using the Flame Projection Apparatus of the Bureau of Explosives, the flame projects more than 18 inches beyond the ignition source with the valve opened fully, or the flame flashes back and burns at the valve with any degree of valve opening;

(c) Using the Open Drum Apparatus of the Bureau of Explosives, there is any significant propogation of flame away from the ignition source;

(d) Using the Closed Drum Apparatus of the Bureau of Explosives, there is any explosion of the vapor-air mixture in the drum.

Test For Corrosivity

(1) pH shall be determined by a pH meter using either method 5.2 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publications SW-846, or by an equivalent method approved by the Administrator of EPA and by the Secretary in accordance with Section 7-218(2).

(2) The rate of corrosion of steel shall be determined by the test method specified by the National Association of Corrosion Engineers, standard TM-01-69, as standardized in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods" or by an equivalent method approved by the Administrator of EPA and by the Secretary.

C. Extraction Procedure (EP) Toxicity Test Procedures

The method employed to determine whether or not a waste exhibits the characteristic of EP toxicity ~~as defined in Section 7-207~~ is described in 40 CFR Part 261, Appendix II.

D. Toxicity Characteristic Leaching Procedure (TCLP)

The method employed to determine whether or not a waste exhibits the characteristic of TCLP toxicity as defined in Section 7-207 is described in 40 CFR Part 268, Appendix I.

E. Chemical Analysis Test Methods

Sampling and chemical analysis methodologies for organic and inorganic waste are specified in the following publication: "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA Publication SW-846 (Second Edition, 1982 as amended by Update I (April, 1984) and Update II (April, 1985), available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161, (703) 487-4600, as document no. B 87-120-291.

F. Method of Analysis for Chlorinated Dibenzo-p-dioxins and Dibenzofurans

The method employed to determine concentrations of tetro-, penta-, and hexachlorinated dibenzo-p-dioxins and dibenzofurans is described in 40 CFR Part 261, Appendix X.

Appendix VI

Land Disposal Restrictions

(40 CFR Part 268)

PART 268 -- LAND DISPOSAL RESTRICTIONS

Subpart A -- General

Sec.

268.1 Purpose, scope, and applicability.

268.2 Definitions applicable to this part.

268.3 Dilution prohibited as a substitute for treatment.

268.4 Treatment surface impoundment exemption.

268.5 Procedures for case-by-case extensions to an effective date.

268.6 Petitions to allow land disposal of a waste prohibited under Subpart C of Part 268.

268.7 Waste analysis.

268.8 Landfill and surface impoundment disposal restrictions.

268.9 Special rules regarding wastes that exhibit a characteristic.

Subpart B -- Schedule for Land Disposal Prohibition and Establishment of Treatment Standards

268.10 Identification of wastes to be evaluated by August 8, 1988.

268.11 Identification of wastes to be evaluated by June 8, 1989.

268.12 Identification of wastes to be evaluated by May 8, 1990.

268.13 Schedule for wastes identified or listed after November 8, 1984.

Subpart C -- Prohibitions on Land Disposal

268.30 Waste specific prohibitions -- Solvent wastes.

268.31 Waste specific prohibitions -- Dioxin-containing wastes.

268.32 Waste specific prohibitions -- California list wastes.

268.33 Waste specific prohibitions -- First third wastes.

268.34 Waste specific prohibitions -- second third wastes.

268.35 Waste specific prohibitions -- Third third wastes.

Subpart D -- Treatment Standards

268.40 Applicability of treatment standards.

268.41 Treatment standards expressed as concentrations in waste extract.

268.42 Treatment standards expressed as specified technologies.

268.43 Treatment standards expressed as waste concentrations. [Reserved]

268.44 Variance from a treatment standard.

Subpart E -- Prohibitions on Storage

268.50 Prohibitions on storage of restricted wastes.

Appendix I -- Toxicity Characteristic Leaching Procedure (TCLP)

Appendix II -- Treatment Standards (As Concentrations in the Treatment Residual Extract)

Appendix III -- List of Halogenated Organic Compounds Regulated Under § 268.32

Appendix IV -- Organometallic Lab Packs

Appendix V -- Organic Lab Packs

Appendix VI -- Recommended Technologies to Achieve Deactivation of Characteristics in Section 268.42

Appendix VII -- Effective Dates of Surface Disposed Wastes Regulated in the LDRs

Appendix VIII -- National Capacity LDR Variances for UIC Wastes

Authority: 42 U.S.C. 6905, 6912(a), 6921, and 6924.

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 § 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 § 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 land disposal under this part, are not prohibited from land disposal if the wastes:

(i) Are disposed into a nonhazardous or hazardous injection well as defined in 40 CFR 144.6(a); and

(ii) Do not exhibit any prohibited characteristic of hazardous waste at the point of injection.

(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 § 261.5 of this chapter;

(2) Waste pesticides that a farmer disposes of pursuant to § 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.

[51 FR 40638, Nov. 7, 1986; 52 FR 21016, June 4, 1987, as amended at 52 FR 25788, July 8, 1987; 53 FR 27165, July 19, 1988; 53 FR 31212, Aug. 17, 1988; 54 FR 36970, Sept. 6, 1989; 55 FR 22686, June 1, 1990]

§ 268.2 Definitions applicable in 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 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 (g)(6) 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), with the following exceptions:

(1) F001, F002, F003, F004, F005 solvent-water mixtures that contain less than 1% by weight TOC or less than 1% by weight total F001, F002, F003, F004, F005 solvent constituents listed in § 268.41, Table CCWE.

(2) K011, K013, K014 wastewaters (as generated) that contain less than 5% by weight TOC and less than 1% by weight TSS.

(3) K103 and K104 wastewaters contain less than 4% by weight TOC and less than 1% by weight TSS.

(g) Inorganic Solid Debris are nonfriable inorganic solids that are incapable of passing through a 9.5 mm standard sieve that require cutting, or crushing and grinding in mechanical sizing equipment prior to stabilization, limited to the following inorganic or metal materials:

(1) Metal slags (either dross or scoria).

(2) Glassified slag.

(3) Glass.

(4) Concrete (excluding cementitious or pozzolanic stabilized hazardous wastes).

(5) Masonry and refractory bricks.

(6) Metal cans, containers, drums, or tanks.

(7) Metal nuts, bolts, pipes, pumps, valves, appliances, or industrial equipment.

(8) Scrap metal as defined in 40 CFR 261.1(c)(6).

[55 FR 22686, June 1, 1990]

§ 268.3 Dilution prohibited as a substitute for treatment.

(a) Except as provided in paragraph (b) of this section, 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 a treatment system which treats 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 treats wastes for purposes of pretreatment requirements under section 307 of the CWA is not impermissible dilution for purposes of this section unless a method has been specified as the treatment standard in § 268.42.

[55 FR 22686, June 1, 1990]

§ 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 § 268.7 or § 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 § 264.13 or § 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 § 260.22 of this chapter. However, residues which are the subject of a valid certification under § 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 § 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 § 264.13 or § 265.13 of this chapter.

(3) The impoundment meets the design requirements of § 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 § 264.221 (d) or (e) of this chapter, or to § 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 § 268.4(a)(3) have been met and submits a copy of the waste analysis plan required under § 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.

[51 FR 40638, Nov. 7, 1986; 52 FR 21016, June 4, 1987, as amended at 52 FR 25788, July 8, 1987; 53 FR 31212, Aug. 17, 1988]

§ 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 1 year from the effective date. The Administrator may renew this extension for up to 1 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 reports 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 § 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 § 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 § 264.301 (c), (d) and (e) of this chapter;

(iii) The surface impoundment, if in interim status, is in compliance with the requirements of Subpart F of Part 265, § 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 § 264.221 (c), (d) and (e) of this chapter.

(v) 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.

(Approved by the Office of Management and Budget under control number 2050-0062)

[51 FR 40638, Nov. 7, 1986; 52 FR 21016, June 4, 1987, as amended at 52 FR 25788, July 8, 1987; 53 FR 31212, Aug. 17, 1988; 54 FR 36971, Sept. 6, 1989; 55 FR 23935, June 13, 1990]

§ 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, 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 a 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 a 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 biphenyls at concentrations greater than or equal to 500 ppm are not eligible for an exemption under this section.

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[51 FR 40638, Nov. 7, 1986; 52 FR 21016, June 4, 1987, as amended at 52 FR 25789, July 8, 1987; 53 FR 31212, Aug. 17, 1988; 54 FR 36971, Sept. 6, 1989]

§ 268.7 Waste analysis.

(a) Except as specified in § 268.32 or section 268.43 of the part, the generator must test his waste, or test an extract developed using the test method described in Appendix I of this part, or use knowledge of the waste, to determine if the waste is restricted from land disposal under this part.

(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 exceeds the applicable prohibition levels set forth in § 268.32 or RCRA § 3004(d), with each shipment of waste the generator must notify the treatment or storage facility in writing of the appropriate treatment standards set forth in Subpart D of this part and any applicable prohibition levels set forth in § 268.32 or RCRA § 3004(d). The notice must include the following information:

(i) EPA Hazardous Waste Number;

(ii) The corresponding treatment standards for wastes F001-F005, F039, and wastes prohibited pursuant to § 268.32 or RCRA Section 3004(d). Treatment standards for all other restricted wastes may be referenced by including on the notification the subcategory of the waste, the treatability group(s) of the waste(s), and the CFR section(s) and paragraphs where the treatment standards appear. Where the applicable treatment standards are expressed as specified technologies in § 268.42, the applicable five-letter treatment code found in Table 1 of § 268.42 (e.g., INCIN, WETOX) also must be listed on the notification.

(iii) The manifest number associated with the shipment of waste; and

(iv) Waste analysis data, where available.

(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 § 268.32 or RCRA § 3004(d).

(i) The notice must include the following information:

(A) EPA Hazardous Waste Number;

(B) The corresponding treatment standards for wastes F001-F005, F039, and wastes prohibited pursuant to § 268.32 or RCRA Section 3004(d). Treatment standards for all other restricted wastes may be referenced by including on the notification the subcategory of the waste, the treatability group(s) of the waste(s), and the CFR section(s) and paragraphs where the treatment standards appear. Where the applicable treatment standards are expressed as specified technologies in § 268.42, the applicable five-letter treatment code found in Table 1 § 268.42 (e.g., INCIN, WETOX) also must be listed on the notification.

(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 possiblity 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 § 268.5, an exemption under § 268.6, or a nationwide capacity variance under subpart C), 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 corresponding treatment standards for wastes F001-F005, F039, and wastes prohibited pursuant to § 268.32 or RCRA section 3004(d). Treatment standards for all other restricted wastes may be referenced by including on the notification the subcategory of the waste, the treatability group(s) of the waste(s), and the CFR section(s) and paragraphs where the treatment standards appear. Where the applicable treatment standards are expressed as specified technologies in § 268.42, the applicable five-letter treatment code found in Table 1 of § 268.42 (e.g., INCIN, WETOX) also must be listed on the notification.

(iii) The manifest number associated with the shipment of waste;

(iv) Waste analysis data, where available; and

(v) The date the waste is subject to the prohibitions.

(4) If a generator is managing a prohibited waste in tanks or containers regulated under 40 CFR 262.34, and is treating such waste in such tanks or containers 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. 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 § 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) 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.

(7) If a generator is managing a lab pack that contains wastes identified in Appendix IV of this part and wishes to use the alternative treatment standard under § 268.42, with each shipment of waste the generator must submit a notice to the treatment facility in accordance with paragraph (a)(1) of this section. 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 contains only the wastes specified in appendix IV to part 268 or solid wastes not subject to regulation under 40 CFR part 261. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

(8) If a generator is managing a lab pack that contains organic wastes specified in Appendix V of this Part and wishes to use the alternate treatment standards under § 268.42, with each shipment of waste the

generator must submit a notice to the treatment facility in accordance with paragraph (a)(1) of this section. The generator also must 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 through analysis and testing or through knowledge of the waste and that the lab pack contains only organic waste specified in Appendix V to Part 268 or solid wastes not subject to regulation under 40 CFR Part 261. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

(9) 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 § 264.13 or § 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 (§ 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 § 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 § 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 (§ 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:

(i) EPA Hazardous Waste Number;

(ii) The corresponding treatment standards for wastes F001-F005, F039, and wastes prohibited pursuant to § 268.32 or RCRA Section 3004(d). Treatment standards for all other restricted wastes may be referenced by including on the notification the subcategory of the waste, the treatability group(s) of the waste(s), and the CFR section(s) and paragraphs where the treatment standards appear. Where the applicable treatment standards are expressed as specified technologies in § 268.42, the applicable five-letter treatment code found in Table 1 of § 268.42 (e.g., INCIN, WETOX) also must be listed on the notification.

(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 § 268.32 or RCRA section 3004(d).

(i) For wastes with treatment standards expressed as concentrations in the waste extract or in the waste (§ 268.41 or § 268.43), or for wastes prohibited under § 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 (§ 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 § 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 § 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.

(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 § 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. With each shipment of such wastes the owner or operator of the recycling facility must submit a certification described in paragraph (b)(5) of this section, and a notice which includes the information listed in paragraph (b)(4) of this section (except the manifest number) to the Regional Administrator, or his delegated representative. The recycling facility also must keep records of the name and location of each entity receiving the hazardous waste-derived product.

(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 § 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 § 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 § 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 § 264.13 or § 265.13.

(Approved by the Office of Management and Budget under control number 2050-0062 and 2040-0042)

[51 FR 40638, Nov. 7, 1986; 52 FR 21016, June 4, 1987, as amended at 52 FR 25789, July 8, 1987; 53 FR 31213, Aug. 17, 1988; 54 FR 26648, June 23, 1989; 54 FR 36971, Sept. 6, 1989; 55 FR 22687, June 1, 1990]

§ 268.8 Landfill and surface impoundment disposal restrictions.

(a) Prior to May 8, 1990, wastes which are otherwise prohibited from land disposal under § 268.33(f) of this part may be disposed in a landfill or surface impoundment which is in compliance with the requirements of § 268.5(h)(2) provided that the requirements of this section are met. As of May 8, 1990, this section is no longer in effect.

(1) Prior to such disposal, the generator has made a good faith effort to locate and contract with treatment and recovery facilities practically available which provide the greatest environmental benefit.

(2) If a generator determines that there is no practically available treatment for his waste, he must fulfill the following specific requirements:

(i) Prior to the initial shipment of waste, the generator must submit a demonstration to the Regional Administrator that includes: a list of facilities and facility officials contacted, addresses, telephone numbers, and contact dates, as well as a written discussion of why he was not able to obtain treatment or recovery for that waste. The generator must also provide to the Regional Administrator the following certification:

I certify under penalty of law that the requirements of 40 CFR 268.8(a)(1) have been met and that disposal in a landfill or surface impoundment is the only practical alternative to treatment currently available. I believe that the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

The generator does not need to wait for Regional Administrator approval of the demonstration/certification before shipment of the waste. However, if the Regional Administrator invalidates the demonstration/certification for the reasons outlined in § 268.8(b)(2), the generator must immediately cease further shipments of the waste, and immediately inform all facilities that received the waste of such invalidation, and keep records of such communication on-site in his files.

(ii) With the initial shipment of waste, the generator must submit a copy of the demonstration and the certification discussed above in § 268.8(a)(2)(i) to the receiving facility. With each subsequent waste shipment, only the certification is required to be submitted provided that the conditions being certified remain unchanged. Such a generator must retain on-site a copy of the demonstration (if applicable) and certification required for each waste shipment 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 disposal. The five-year record retention requirement is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

(3) If a generator determines that there are practically available treatments for his waste, he must contract to use the practically available technology that yields the greatest environmental benefit. He must also fulfill the following specific requirements:

(i) The generator must submit to the Regional Administrator, prior to the initial shipment of waste, a demonstration that includes: a list of facilities and facility officials contacted, addresses, telephone numbers, and contact dates, as well as a written discussion explaining why the treatment or recovery technology chosen provides the greatest environmental benefit. The generator must also provide to the Regional Administrator the following certification:

I certify under penalty of law that the requirements of 40 CFR 268.8(a)(1) have been met and that I have contracted to treat my waste (or otherwise provide treatment) by the practically available technology which yields the greatest environmental benefit, as indicated in my demonstration. I believe that the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

The generator does not need to wait for Regional Administrator approval of the demonstration/certification before shipment of the waste.

(ii) With the initial shipment of waste, the generator must submit to the receiving facility a copy of the demonstration and the certification discussed above in § 268.8(a)(3)(i). With each subsequent waste shipment, only the certification is required to be submitted provided that the conditions being certified remain unchanged. Such a generator must retain on-site a copy of the demonstration (if applicable) and certification required for each waste shipment 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 disposal. The five-year record retention requirement is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

(4) Where the generator has determined that there is practically available treatment for his waste prior to disposal, with the initial shipment of waste, such generator must submit a copy of the demonstration and the certification required in paragraph (a)(2)(B) of this section to the receiving facility. With each subsequent waste shipment, only the certification is required to be submitted provided that the conditions being certified remain unchanged. Such a generator must retain on-site a copy of the demonstration (if applicable) and certification required for each waste shipment 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 disposal. The five-year record retention requirement is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

(b) After receiving the demonstration and certification, the Regional Administrator may request any additional information which he deems necessary to evaluate the certification, and submit a new demonstration and certification as provided in § 268.8(a) to the receiving facility.

(1) A generator who has submitted a certification under this section must immediately notify the Regional Administrator when he has knowledge of any change in the conditions which formed the basis of his certification.

(2) If, after review of the certification, the Regional Administrator determines that practically available treatment exists where the generator has certified otherwise, or that there exists some other method of practically available treatment yielding greater environmental benefit than that which the generator has certified, the Regional Administrator may invalidate the certification.

(3) If the Regional Administrator invalidates a certification, the generator must immediately cease further shipments of the waste, and inform all facilities that received the waste of such invalidation and keep records of such communication on-site in his files.

(c) A treatment, recovery or storage facility receiving wastes subject to a valid certification must keep copies of the generator's demonstration (if applicable) and certification in his operating record.

(1) The owner or operator of a treatment or recovery facility must certify that he has treated the waste in accordance with the generator's demonstration. The following certification is required:

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 treatment as specified in the generator's demonstration. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(2) The owner or operator of a treatment, recovery or storage facility must, for each initial shipment of waste, send a copy of the generator's demonstration (if applicable) and certification under § 268.8(a)(2)(i) or § 268.8(a)(3)(i) and certification under § 268.8(c)(1) (if applicable) to the facility receiving the waste or treatment residues. With each subsequent waste shipment, only the certification is required to be submitted provided that the conditions being certified remain unchanged.

(d) The owner or operator of a disposal facility must ensure that those wastes prohibited under § 268.33(f) are subject to a certification according to the requirements of this section prior to disposal in a landfill or surface impoundment, and that the units receiving such wastes must meet the minimum technological requirements of § 268.5(h)(2).

(e) Once the certification is received by the Regional Administrator, and provided that the wastes have been treated by the treatment (if any), determined by the generator to yield the greatest environmental benefit practically available, the wastes or treatment residuals may be disposed in a landfill or surface impoundment unit meeting the requirements of § 268.5(h)(2), unless otherwise prohibited by the Regional Administrator.

(Approved by the Office of Management and Budget under control number 2050-0085).

[53 FR 31214, Aug. 17, 1988, as amended at 54 FR 36971, Sept. 6, 1989; 55 FR 22688, June 1, 1990; 55 FR 23935, June 13, 1990]

§ 268.9 Special rules regarding wastes that exhibit a characteristic.

(a) The initial generator of a solid waste must determine each 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 a waste code designation for any applicable listing under 40 CFR part 261, subpart D, and also one or more waste code designations under 40 CFR part 261, subpart C where the waste exhibits the relevant characteristic.

(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 § 268.7 requirements, except that once the waste is no longer hazardous, for each shipment of such wastes to a subtitle D facility the initial generator or the treatment facility need not send a § 268.7 notification to such facility. In such circumstances, a notification and certification must be sent to the appropriate EPA Regional Administrator (or his delegated representative) or State authorized to implement part 268 requirements.

(1) The notification must include the following information:

(i) The name and address of the subtitle D facility receiving the waste shipment;

(ii) A description of the waste as initially generated, including the applicable EPA Hazardous Waste Number(s) and treatability group(s);

(iii) The treatment standards applicable to the waste at the initial point of generation.

(2) The certification must be signed by an authorized representative and must state the language found in § 268.7(b)(5)(i).

[55 FR 22688, June 1, 1990]

Subpart B -- Schedule for Land Disposal Prohibition and Establishment of Treatment Standards

Source: 51 FR 19305, May 28, 1986, unless otherwise noted.

§ 268.10 Identification of wastes to be evaluated by August 8, 1988.

EPA will take action under sections 3004(g)(5) and 3004(m), of the Resource Conservation and Recovery Act, by August 8, 1988, for the following wastes (for ease of understanding the wastes have been listed by the section of 40 CFR Part 261 under which they were listed):

§ 261.31 Wastes

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.

F007 -- Spent cyanide plating bath solutions from electroplating operations.

F008 -- Plating bath sludges 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.

F019 -- Wastewater treatment sludges from the chemical conversion coating of aluminum.

§ 261.32 Wastes

K001 -- Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.

K004 -- Wastewater treatment sludge from the production of zinc yellow pigments.

K008 -- Over residue from the production of chrome oxide green pigments.

K011 -- Bottom stream from the wastewater stripper in the production of acrylonitrile.

K013 -- Bottom stream from the acetonitrile column in the production of acrylonitrile.

K014 -- Bottoms from the acetonitrile purification column in the production of acrylonitrile.

K015 -- Still bottoms from the distillation of benzyl chloride.

K016 -- Heavy ends or distillation residues from the production of carbon tetrachloride.

K017 -- Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.

K018 -- Heavy ends from the fractionation column in ethyl chloride production.

K020 -- Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.

K021 -- Aqueous spent antimony catalyst waste from fluoromethanes production.

K022 -- Distillation bottom tars from the production of phenol/acetone from cumene.

K024 -- Distillation bottoms from the production of phthalic anhydride from naphthalene.

K030 -- Column bottom or heavy ends from the combined production of trichloroethylene and perchloroethylene.

K031 -- By-products salts generated in the production of MSMA and cacodylic acid.

K035 -- Wastewater treatment sludges generated in the production of creosote.

K036 -- Still bottoms from toluene reclamation distillation in the production of disulfoton.

K037 -- Wastewater treatment sludge from the production of disulfoton.

K044 -- Wastewater treatment sludges from the manufacturing and processing of explosives.

K045 -- Spent carbon from the treatment of wastewater containing explosives.

K046 -- Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.

K047 -- Pink/red water from TNT operations.

K048 -- Dissolved air flotation (DAF) float from the petroleum refining industry.

K049 -- Stop oil emulsion solids from the petroleum refining industry.

K050 -- Heat exchange bundle cleaning sludge from the petroleum refining industry.

K051 -- API separator sludge from the petroleum refining industry.

K052 -- Tank bottoms (leaded) from the petroleum refining industry.

K060 -- Ammonia still lime sludge from coking operations.

K061 -- Emission control dust/sludge from the primary production of steel in electric furnaces.

K062 -- Spent pickle liquor from steel finishing operations in chlorine production.

K069 -- Emission control dust/sludge from secondary lead smelting.

K071 -- Brine purification muds from the mercury cells process in chlorine production, where separately prepurified brine is not used.

K073 -- Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes

K083 -- Distillation bottoms from aniline production.

K084 -- Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.

K085 -- Distillation of fractionation column bottoms from the production of chlorobenzenes.

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.

K087 -- Decanter tank tar sludge from coking operations.

K099 -- Untreated wastewater from the production of 2,4-D.

K101 -- Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.

K102 -- Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.

K103 -- Process residues from aniline extraction from the production of aniline.

K104 -- Combined wastewater streams generated from nitrobenzene/aniline production.

K106 -- Waste water treatment sludge from the mercury cell process in chlorine production.

§ 261.33(e) Wastes

P001 -- Warfarin, when present at concentration greater than 0.3%

P004 -- Aldrin

P005 -- Allyl alcohol

P010 -- Arsenic acid

P011 -- Arsenic (V) oxide

P012 -- Arsenic (III) oxide

P015 -- Beryllium dust

P016 -- Bis-(chloromethyl) ether

P018 -- Brucine

P020 -- Dinoseb

P030 -- Soluble cyanide salts not elsewhere specified

P036 -- Dichlorophenylarsine

P037 -- Dieldrin

P039 -- Disulfoton

P041 -- Diethyl-p-nitrophenyl phosphate

P048 -- 2,4-Dinitrophenol

P050 -- Endosulfan

P058 -- Fluoracetic acid, sodium salt

P059 -- Heptachlor

P063 -- Hydrogen cyanide

P068 -- Methyl Hydrazine

P069 -- Methyllactonitrile

P070 -- Aldicarb

P071 -- Methyl parathion

P081 -- Nitroglycerine

P082 -- N-Nitrosodimethylamine

P084 -- N-Nitrosomethylvinylamine

P087 -- Osmium tetraoxide

P089 -- Parathion

P092 -- Phenylmercuric acetate

P094 -- Phorate

P097 -- Famphur

P102 -- Propargyl alcohol

P105 -- Sodium azide

P108 -- Strychnine and salts

P110 -- Tetraethyl lead

P115 -- Thallium (I) sulfate

P120 -- Vanadium pentoxide

P122 -- Zinc phosphide, when present at concentrations greater than 10%

P123 -- Toxaphene

§ 261.33(f) Wastes

U007 -- Acrylamide

U009 -- Acrylonitrile

U010 -- Mitomycin C

U012 -- Aniline

U016 -- Benz(c)acridine

U018 -- Benz(a)anthracene

U019 -- Benzene

U022 -- Benzo(a)pyrene

U029 -- Methyl bromide

U031 -- n-Butanol

U036 -- Chlordane, technical

U037 -- Chlorobenzene

U041 -- n-Chloro-2,3-epoxypropane

U043 -- Vinyl chloride

U044 -- Chloroform

U046 -- Chloromethyl methyl ether

U050 -- Chrysene

U051 -- Creosote

U053 -- Crotonaldehyde

U061 -- DDT

U063 -- Dibenz o (a, h) anthracene

U064 -- 1,2:7,8 Dibenzopyrene

U066 -- Dibromo-3-chloropropane 1,2-

U067 -- Ethylene dibromide

U074 -- 1,4-Dichloro-2-butene

U077 -- Ethane, 1,2-dichloro-

U078 -- Dichloroethylene, 1,1-

U086 -- N,N Diethylhydrazine

U089 -- Diethylstilbestrol

U103 -- Dimethyl sulfate

U105 -- 2,4-Dinitrotoluene

U108 -- Dioxane, 1,4-

U115 -- Ethylene oxide

U122 -- Formaldehyde

U124 -- Furan

U129 -- Lindane

U130 -- Hexachlorocyclopentadiene

U133 -- Hydrazine

U134 -- Hydrofluoric acid

U137 -- Indeno(1,2,3-cd)pyrene

U151 -- Mecury

U154 -- Methanol

U155 -- Methapyrilene

U157 -- 3-Methylcholanthrene

U158 -- 4,4-Methylene-bis-(2-chloroaniline)

U159 -- Methyl ethyl ketone

U171 -- Nitropropane, 2-

U177 -- N-Nitroso-N-methylurea

U180 -- N-Nitrosopyrrolidine

U185 -- Pentachloronitrobenzene

U188 -- Phenol

U192 -- Pronamide

U200 -- Reserpine

U209 -- Tetrachloroethane, 1,1,2,2-

U210 -- Tetrachloroethylene

U211 -- Carbon tetrachloride

U219 -- Thiourea

U220 -- Toluene

U221 -- Toluenediamine

U223 -- Toluene diisocyanate

U226 -- Methylchloroform

U227 -- Trichloroethane, 1,1,2-

U228 -- Trichloroethylene

U237 -- Uracil mustard

U238 -- Ethyl carbamate

U248 -- Warfarin, when present at concentrations of 0.3% or less

U249 -- Zinc phosphide, when present at concentrations of 10% or less

§ 268.11 Identification of wastes to be evaluated by June 8, 1989.

EPA will take action under sections 3004(g)(5) and 3004(m) of the Resource Conservation and Recovery Act, by June 8, 1989, for the following wastes (for ease of understanding the wastes have been listed by the section of 40 CFR Part 261 under which they were listed):

§ 261.31 Wastes

F010 -- Quenching bath sludge from oil baths from metal heat 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 wastewater treatment sludges from metal heat operations where cyanides are used in the process.

F024 -- Wastes including but not limited to, distillation residues, heavy ends, tars and reactor clean-out wastes from the production of chlorinated aliphatic hydrocarbons, having carbon content from one to five, utilizing free

radical catalyzed processes. [This listing does not include light ends, spent filters and filter aids, spend desiccants, wastewater, wastewater treatment sludges, spent catalysts, and wastes listed in § 261.32.].

§ 261.32 Wastes

K009 -- Distillation bottoms from the production of acetaldehyde from ethylene.

K010 -- Distillation side cuts from the productions of acetaldehyde from ethylene.

K019 -- Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.

K025 -- Distillation bottoms from the production of nitrobenzene by the nitration of benzene.

K027 -- Centrifuge and distillation residues from toluene diisocyanate production.

K028 -- Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.

K029 -- Waste from the product steam stripper in the production of 1,1,1-trichloroethane.

K038 -- Wastewater from the washing and stripping of phorate production.

K039 -- Filter cake from the filtration of diethylphosphoro-dithioic acid in the production of phorate.

K040 -- Wastewater treatment sludge from the production of phorate.

K041 -- Wastewater treatment sludge from the production of toxaphene.

K042 -- Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.

K043 -- 2,6-Dichlorophenol waste from the production of 2,4-D.

K095 -- Distillation bottoms from the production of 1,1,1-trichloroethane.

K096 -- Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.

K097 -- Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.

K098 -- Untreated process wastewater from the production of toxaphene.

K105 -- Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.

§ 261.33(e) Wastes

P002 -- 1-Acetyl-2-thiourea

P003 -- Acrolein

P007 -- 5-(Aminoethyl)-3-isoxazolol

P008 -- 4-Aminopyridine

P014 -- Thiophenol

P026 -- 1-(o-Chlorophenyl)thiourea

P027 -- Propanenitrile, 3-chloro

P029 -- Copper cyanides

P040 -- O,O-Diethyl o-pyrazinyl phosphorothioate

P043 -- Diisopropyl fluorophosphate

P044 -- Dimethoate

P049 -- 2,4-Dithiobiuret

P054 -- Aziridine

P057 -- Fluoracetamide

P060 -- Isodrin

P062 -- Hexaethyltetraphosphate

P066 -- Methomyl

P067 -- 2-Methylaziridine

P072 -- Alpha-naphthylthiourea (ANTU)

P074 -- Nickel cyanide

P085 -- Octamethylpyrophosphoramide

P098 -- Potassium cyanide

P104 -- Silver cyanide

P106 -- Sodium cyanide

P107 -- Strontium sulfide

P111 -- Tetraethylpyrophosphate

P112 -- Tetranitromethane

P113 -- Thallic oxide

P114 -- Thallium (I) selenite

§ 261.33(f) Wastes

U002 -- Acetone

U003 -- Acetonitrile

U005 -- o-Acetylaminofluorene

U008 -- Acrylic acid

U011 -- Amitrole

U014 -- Auramine

U015 -- Azaserine

U020 -- Benzenesulfonyl chloride

U021 -- Benzidine

U023 -- Benzotrichloride

U025 -- Dichloroethyl ether

U026 -- Chlornaphazine

U028 -- Bis-(2-ethylhexyl)phthalate

U032 -- Calcium chromate

U035 -- Chlorambucil

U047 -- Beta-chloronaphthalene

U049 -- 4-Chloro-o-toluidine, hydrochloride

U057 -- Cyclohexanone

U058 -- Cyclophosphamide

U059 -- Daunomycin

U060 -- DDD

U062 -- Diallate

U070 -- o-Dichlorobenzene

U073 -- Dichlorobenzidene, 3,3-

U080 -- Methylene chloride

U083 -- Dichloropropane, 1,2-

U092 -- Dimethylamine

U093 -- Dimethylaminoazobenzene

U094 -- Dimethylbenz(a)anthracene,7,12-

U095 -- Dimethylbenzidine,3,3'-

U097 -- Dimethylcarbamoyl chloride

U098 -- Dimethylhydrazine, 1,1-

U099 -- Dimethylhydrazine, 1,2-

U101 -- Dimethylphenol, 2,4-

U106 -- Dinitrotoluene, 2,6-

U107 -- Di-n-octyl phthalate

U109 -- 1,2,-Diphenylhydrazine

U110 -- Dipropylamine

U111 -- Di-N-Propylnitrosamine

U114 -- Ethylenebis-(dithiocarbamic acid)

U116 -- Ethylene thiourea

U119 -- Ethyl methanesulfonate

U127 -- Hexachlorobenzene

U128 -- Hexachlorobutadiene

U131 -- Hexachloroethane

U135 -- Hydrogen sulfide

U138 -- Methyl iodide

U140 -- Isobutyl alcohol

U142 -- Kepone

U143 -- Lasiocarpine

U144 -- Lead acetate

U146 -- Lead subacetate

U147 -- Maleic anhydride

U149 -- Malononitrile

U150 -- Melphalan

U161 -- Methyl isobutyl ketone

U162 -- Methyl methacrylate

U163 -- N-Methyl-N-nitro-N-nitrosoguanidine

U164 -- Methylthiouracil

U165 -- Naphthalene

U168 -- Napthylamine, 2-

U169 -- Nitrobenzene

U170 -- p-Nitrophenol

U172 -- N-Nitroso-di-n-butylamine

U173 -- N-Nitroso-diethanolamine

U174 -- N-Nitroso-diethylamine

U176 -- N-Nitroso-N-ethylurea

U178 -- N-Nitroso-N-methylurethane

U179 -- N-Nitrosopiperidine

U189 -- Phosphorus sulfide

U193 -- 1,3-Propane sultone

U196 -- Pyridine

U203 -- Safrole

U205 -- Selenium disulfide

U206 -- Streptozotocin

U208 -- Terachloroethane, 1,1,1,2-

U213 -- Tetrahydrofuran

U214 -- Thallium (I) acetate

U215 -- Thallium (I) carbonate

U216 -- Thallium (I) chloride

U217 -- Thallium (I) nitrate

U218 -- Thioacetamide

U235 -- Tris (2,3-Dibromopropyl) phosphate

U239 -- Xylene

U244 -- Thiram

§ 268.12 Identification of wastes to be evaluated by May 8, 1990.

(a) EPA will take action under sections 3004(g)(5) and 3004(m) of the Resource Conservation and Recovery Act, by May 8, 1990, for the following wastes (for ease of understanding, the wastes have been listed by the section of 40 CFR Part 261 under which they were listed):

§ 261.32 Wastes

K002 -- Wastewater treatment sludge from the production of chrome yellow and orange pigments.

K003 -- Wastewater treatment sludge from the production of molybdate orange 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.

K023 -- Distillation light ends from the production of phthalic anhydride from naphthalene.

K026 -- Stripping still tails from the production of methyl ethyl pyridines.

K032 -- Wastewater treatment sludge from the production of chlordane.

K033 -- Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.

K034 -- Filter solids from the hexachlorocyclopentadiene in the production of chlordane.

K093 -- Distillation light ends from the production of phthalic anhydride from ortho-xylene.

K094 -- Distillation bottoms from the production of phthalic anhydride from ortho-xylene.

K100 -- Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.

§ 261.33(e) Wastes

P006 -- Aluminum phosphide

P009 -- Ammonium picrate

P013 -- Barium cyanide

P017 -- Bromoacetone

P021 -- Calcium cyanide

P022 -- Carbon disulfide

P023 -- Chloroacetaldehyde

P024 -- p-Chloroaniline

P028 -- Benzyl chloride

P031 -- Cyanogen

P033 -- Cyanogen chloride

P034 -- 4,6-Dinitro-o-cyclohexylphenol

P038 -- Diethylarsine

P042 -- Epinephrine

P045 -- Thiofanox

P046 -- Alpha, alpha-Dimethylphenethylamine

P047 -- 4,6-Dinitro-o-cresol and salts

P051 -- Endrin

P056 -- Fluorine

P064 -- Methyl isocyanate

P065 -- Mercury fulminate

P073 -- Nickel carbonyl

P075 -- Nicotine and salts

P076 -- Nitric oxide

P077 -- p-Nitroaniline

P078 -- Nitrogen dioxide

P088 -- Endothall

P093 -- N-Phenylthiourea

P095 -- Phosgene

P096 -- Phosphine

P099 -- Potassium silver cyanide

P101 -- Propanenitrile

P103 -- Selenourea

P109 -- Tetraethyldithiopyrophosphate

P116 -- Thiosemicarbazide

P118 -- Trichloromethanethiol

P119 -- Ammonium vanadate

P121 -- Zinc cyanide

§ 261.33(f) Wastes

U001 -- Acetaldehyde

U004 -- Acetophenone

U006 -- Acetyl chloride

U017 -- Benzal chloride

U024 -- Bis(2-chloroethoxy)methane

U027 -- Bis(2-chloroisopropyl)ether

U030 -- Benzene, 1-bromo-4-phenoxy

U033 -- Carbonyl fluoride

U034 -- Chloral

U038 -- Ethyl-4-4'-dichlorobenzilate

U039 -- 4-Chloro-m-cresol

U042 -- Vinyl ether, 2-chloroethyl

U045 -- Methyl chloride

U048 -- o-Chlorophenol

U052 -- -Cresols

U055 -- Cumene

U056 -- Cyclohexane

U068 -- Methane, dibromo

U069 -- Dibutyl phthalate

U071 -- m-Dichlorobenzene

U072 -- p-Dichlorobenzene

U075 -- Dichlorodifluoromethane

U076 -- Ethane, 1,1-dichloro-

U079 -- 1,2-Dichlorethylene

U081 -- 2,4-Dichlorophenol

U082 -- 2,6-Dichlorophenol

U084 -- 1,3-Dichloropropene

U085 -- 2,2'-Bioxirane

U087 -- O,O,-Diethyl-S-methyl-dithiophosphate

U088 -- Diethyl phthalate

U090 -- Dihydrosafrole

U091 -- 3,3'-Dimethoxybenzidine

U096 -- alpha,alpha-Dimethylbenzylhydroxyperoxide

U102 -- Dimethyl phthalate

U112 -- Ethyl acetate

U113 -- Ethyl acrylate

U117 -- Ethyl ether

U118 -- Ethylmethacrylate

U120 -- Fluoranthene

U121 -- Trichloromonofluoromethane

U123 -- Formic acid

U125 -- Furfural

U126 -- Glycidylaldehyde

U132 -- Hexachlorophene

U136 -- Cacodylic acid

U139 -- Iron dextran

U141 -- Isosafrole

U145 -- Lead phosphate

U148 -- Maleic hydrazide

U152 -- Methacrylonitrile

U153 -- Methanethiol

U156 -- Methyl chlorocarbonate

U160 -- Methyl ethyl ketone peroxide

U166 -- 1,4-Naphthaquinone

U167 -- 1-Naphthylamine

U181 -- 5-Nitro-o-toluidine

U182 -- Paraldehyde

U183 -- Pentachlorobenzene

U184 -- Pentachloroethane

U186 -- 1,3-Pentadiene

U187 -- Phenacetin

U190 -- Phthalic anhydride

U191 -- 2-Picoline

U194 -- 1-Propanamine

U197 -- p-Benzoquinone

U201 -- Resorcinol

U202 -- Saccharin and salts

U204 -- Selenious acid

U207 -- 1,2,4,5-tetrachlorobenzene

U222 -- o-Toluidine hydrochloride

U225 -- Bromoform

U234 -- Sym-Trinitrobenzene

U236 -- Trypan blue

U240 -- 2,4-D, salts and esters

U243 -- Hexachloropropene

U246 -- Cyanogen bromide

U247 -- Methoxychlor

Wastes identified as hazardous based on a characteristic alone (i.e., corrosivity, reactivity, ignitability and EP toxicity).

(b) Wastewater residues (less than 1% total organic carbon and less than 1% total suspended solids) resulting from the following well-designed and well-operated treatment methods for wastes listed in §§ 268.10 and 268.11 for which EPA has not promulgated wastewater treatment standards: metals recovery, metals precipitation, cyanide destruction, carbon adsorption, chemical oxidation, steam stripping, biodegradation, and incineration or other direct thermal destruction.

(c) Hazardous wastes listed in §§ 268.10 and 268.11 that are mixed hazardous/radioactive wastes.

(d) Multi-source leachate that is derived from disposal of any listed waste, except from Hazardous Wastes F020, F021, F022, F023, F026, F027, or F028.

(e) Nonwastewater forms of wastes listed in § 268.10 that were originally disposed before August 17, 1988 and for which EPA has promulgated ''no land disposal'' as the treatment standard (§ 268.43, Table CCW, No Land Disposal Subtable). This provision does not apply to waste codes K044, K045, K047, and K061 (high zinc subcategory).

(f) Nonwastewater forms of wastes listed in § 268.10 for which EPA has promulgated ''no land disposal'' as the treatment standard (§ 268.43, Table CCW, No Land Disposal Subtable) that are generated in the course of treating wastewater forms of the wastes. This provision does not apply to waste codes K044, K045, K047, and K061 (high zinc subcategory).

(g) Nonwastewater forms of waste codes K015 and K083.

[51 FR 19305, May 28, 1986, as amended at 53 FR 31215, Aug. 17, 1988; 54 FR 8266, Feb. 27, 1989; 54 FR 18837, May 2, 1989; 54 FR 26648, June 23, 1989]

§ 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.

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 solventcontaminated soil (non-CERCLA or RCRA corrective action) containing less than 1 percent total F001-F005 solvent constituents listed in Table CCWE of § 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 § 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 § 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 § 268.5, with respect to those wastes and units covered by the extension.

[53 FR 31216, Aug. 17, 1988]

§ 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, 1988, and November 8, 1990, wastes included in paragraph (a)(1) 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) 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 § 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 §

268.5, with respect to those wastes covered by the extension.

[53 FR 31216, Aug. 17, 1988]

§ 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) -- (c) [Reserved]

(d) The requirements of paragraphs (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 § 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 § 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/1 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 in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in § 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 § 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 § 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., § 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 § 260.11(a) of this chapter.)

(j) Except as otherwise provided in this paragraph, the waste analysis and recordkeeping requirements of § 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 § 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 biphenyls (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.

[52 FR 25790, July 8, 1987, as amended at 52 FR 41296, Oct. 27, 1987; 53 FR 31216, Aug. 17, 1988; 54 FR 36972, Sept. 6, 1989]

§ 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 § 268.43(a), K008 wastes specified in § 268.43(a), K016, K018, K019, K020, K021 wastes specified in § 268.43(a), K022 (nonwastewater), K024, K025 nonwastewaters specified in § 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 § 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 § 268.41 applicable to K061 wastes that contain less than 15% zinc.

(b) Effective August 8, 1990, the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste Nos. K048, K049, K050, K051, K052, K061 (containing 15% zinc or greater), and K071 are 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 § 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 § 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 § 268.5, with respect to those wastes covered by the extension.

(f) Between August 8, 1988, and May 8, 1990, the wastes specified in § 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 § 268.32 of this Part, but not including wastes subject to a treatment standard under § 268.42 of this Part, are prohibited from disposal in a landfill or surface impoundment unless a demonstration and certification have been submitted to § 268.8.

(g) To determine whether a hazardous waste listed in § 268.10 exceeds the applicable treatment standards specified in § 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.

[53 FR 31217, Aug. 17, 1988, as amended at 54 FR 36972, Sept. 6, 1989; 55 FR 23935, June 13, 1990]

§ 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 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).

(2) Effective July 8, 1989 and continuing until December 8, 1989, F011 (nowastewaters) and F012 (nonwastewaters) are prohibited from land disposal pursuant to the treatment standards specified in §§ 268.41 and 268.43 applicable to F007, F008, and F009 nonwastewaters. Effective December 8, 1989 F011 (nowastewaters) and F012 (nonwastewaters) are prohibited from land disposal pursuant to the treatment standards specified in §§ 268.41 and 268.43 applicable to F011 (nonwastewaters) and F012 (nonwastewaters) .

(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 § 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 § 268.6, with respect to those wastes and units covered by the petition.

(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 § 268.5, with respect to those wastes covered by the extension.

(h) Between June 8, 1989 and May 8, 1990, the wastes specified in § 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 § 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 § 268.8.

(i) To determine whether a hazardous waste listed in §§ 268.10, 268.11, and 268.12 exceeds the applicable treatment standards specified in §§ 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.

[54 FR 26648, June 23, 1989]

§ 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 F006 (wastewaters), F019, 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); K017; K021 (wastewaters); K022 (wastewaters); K025 (wastewaters); K026; K029 (wastewaters); K031 (wastewaters); K032; K033; K034; K035; K041; K042; K046 (wastewaters); K048 (wastewaters); K049 (wastewaters); K050 (wastewaters); K051 (wastewaters); K052 (wastewaters); K060 (wastewaters); K061 (wastewaters); K069 (wastewaters); K073; K083 (wastewaters); 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 (wastewaters); P020; P022; P023; P024; 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; P109; 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 Numbers 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 (nonwastewaters); 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); D008 (lead materials stored before secondary smelting); and D009 (nonwastewaters); inorganic solids debris as defined in 40 CFR 268.2(a)(7) (which also applies to chromium refractory bricks carrying the EPA Hazardous Waste Numbers K048-K052); and RCRA hazardous wastes that contain naturally occurring radioactive materials are prohibited from land disposal.

(d) Effective May 8, 1992, hazardous wastes listed in 40 CFR 268.12 that are mixed radioactive/hazardous wastes are prohibited from land disposal.

(e) Effective May 8, 1992, the wastes specified in this section having a treatment standard in subpart D of this part based on incineration, mercury retorting, or vitrification, and which are contaminated soil or debris, are prohibited from land disposal.

(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 § 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 § 268.5(h)(2).

(h) Between May 8, 1990, and May 8, 1992, wastes included in paragraphs (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 § 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 § 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 § 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.

(j) To determine whether a hazardous waste listed in § 268.10, 268.11, and 268.12 exceeds the applicable treatment standards specified in §§ 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.

[55 FR 22688, June 1, 1990]

Subpart D -- Treatment Standards

§ 268.40 Applicability of treatment standards.

(a) A restricted waste identified in § 268.41 may be land disposed only if an extract of the waste or of the treatment residue of the waste developed using the test method in appendix I of this part does not exceed the value shown in Table CCWE of § 268.41 for any hazardous constituent listed in Table CCWE for that waste, with the following exceptions: D004, D008, K031, K084, K101, K102, P010, P011, P012, P036, P038, and U136. Wastes D004, D008, K031, K084, K101, K102, P010, P011, P012, P036, P038, and U136 may be land disposed only if an extract of the waste or of the treatment residue of the waste developed using either the test method in Appendix I of this part or the test method in appendix II of part 261 does not exceed the value shown in Table CCW of § 268.41 for any hazardous constituent listed in Table CCWE for that waste.

(b) A restricted waste for which a treatment technology is specified under § 268.42(a) may be land disposed after it is treated using that specified technology or an equivalent treatment method approved by the Administrator under the procedures set forth in § 268.42(b).

(c) Except as otherwise specified in § 268.43(c), a restricted waste identified in § 268.43 may be land disposed only if the constituent concentrations in the waste or treatment residue of the waste do not exceed the value shown in Table CCW of § 268.43 for any hazardous constituents listed in Table CCW for that waste.

[52 FR 25790, July 8, 1987, as amended at 53 FR 31217, Aug. 17, 1988; 55 FR 22689, June 1, 1990]

§ 268.41 Treatment standards expressed as concentrations in waste extract.

(a) Table CCWE identifies the restricted wastes and the concentrations of their associated constituents which may not be exceeded by the extract of a waste or waste treatment residual developed using the test method in Appendix I of this part for the allowable land disposal of such wastes, with the exception of wastes D004, D008, K031, K084, K101, K102, P010, P011, P012, P036, P038, and U136. Table CCWE identifies the restricted wastes D004, D008, K031, K084, K101, K102, P010, P011, P012, P036, P038, and U136 and the concentrations of their associated constituents which may not be exceeded by the extract of a waste or waste treatment residual developed using the test method in Appendix I of this part or appendix II of 40 CFR part 261 for the allowable land disposal of such wastes. (Appendix II of this part provides Agency guidance on treatment methods that have been shown to achieve the Table CCWE levels for the respective wastes. Appendix II of this part is not a regulatory requirement

but is provided to assist generators and owners/operators in their selection of appropriate treatment methods.) Compliance with these concentrations is required based upon grab samples.

Table CCWE. -- Constituent Concentrations in Waste Extract

Waste code	See also	Regulated hazardous constituent	CAS number for regulated hazardous constituent	Waste-waters concentration (mg/l)	Nonwaste-waters concentration (mg/l)
D004	Table CCW in 268.43	Arsenic	7440-38-2	NA	5.0#
D005	Table CCW in 268.43	Barium	7440-39-3	NA	100
D006	Table CCW in 268.43	Cadmium	7440-43-9	NA	1.0
D007	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	5.0
D008	Table CCW in 268.43	Lead	7439-92-1	NA	5.0
D009 (Low Mercury Subcategory -- less than 260 mg/kg Mercury)	Table 2 in 268.42 and Table CCW in 268.43	Mercury	7439-97-6	NA	0.20
D010	Table CCW in 268.43	Selenium	7782-49-2	NA	5.7
D011	Table CCW in 268.43	Silver	7440-22-4	NA	5.0
F001-F005 spent solvents	Table 2 in 268.42 and Table CCW in 268.43	Acetone	67-64-1	0.05	0.59
		n-Butyl alcohol	71-36-3	5.0	5.0
		Carbon disulfide	75-15-0	1.05	4.81
		Carbon tetrachloride	56-23-5	0.05	0.96
		Chlorobenzene	108-90-7	0.15	0.05
		Cresols (and cresylic acid)		2.82	0.75
		Cyclohexanone	108-94-1	0.125	0.75
		1,2-Dichlorobenzene	95-50-1	0.65	0.125
		Ethyl acetate	141-78-6	0.05	0.75
		Ethylbenzene	100-41-4	0.05	0.053
		Ethyl ether	60-29-7	0.05	0.75
		Isobutanol	78-83-1	5.0	5.0
		Methanol	67-56-1	0.25	0.75
		Methylene chloride	75-9-2	0.20	0.96
		Methyl ethyl ketone	78-93-3	0.05	0.75
		Methyl isobutyl ketone	108-10-1	0.05	0.33
		Nitrobenzene	98-95-3	0.66	0.125
		Pyridine	110-86-1	1.12	0.33
		Tetrachloroethylene	127-18-4	0.079	0.05
		Toluene	108-88-3	1.12	0.33
		1,1,1-Trichloroethane	71-55-6	1.05	0.41
		1,1,2-Trichloro-1,2,2-Tetrifluorethane	76-13-1	1.05	0.96
		Trichloroethylene	79-01-6	0.062	0.091
		Trichlorofluoromethane	75-69-4	0.05	0.96

		Xylene		0.05	0.15
F006	Table CCW in 268.43	Cadmium	7440-43-9	NA	0.066
		Chromium (Total)	7440-47-32	NA	5.2
		Lead	7439-92-1	NA	0.51
		Nickel	7440-02-0	NA	0.32
		Silver	7440-22-4	NA	0.072
F007	Table CCW in 268.43	Cadmium	7440-43-9	NA	0.066
		Chromium (Total)	7440-47-32	NA	5.2
		Lead	7439-92-1	NA	0.51
		Nickel	7440-02-0	NA	0.32
		Silver	7440-22-4	NA	0.072
F008	Table CCW in 268.43	Cadmium	7440-43-9	NA	0.066
		Chromium (Total)	7440-47-32	NA	5.2
		Lead	7439-92-1	NA	0.51
		Nickel	7440-02-0	NA	0.32
		Silver	7440-22-4	NA	0.072
F009	Table CCW in 268.43	Cadmium	7440-43-9	NA	0.066
		Chromium (Total)	7440-47-32	NA	5.2
		Lead	7439-92-1	NA	0.51
		Nickel	7440-02-0	NA	0.32
		Silver	7440-22-4	NA	0.072
F011	Table CCW in 268.43	Cadmium	7440-43-9	NA	0.066
		Chromium (Total)	7440-47-32	NA	5.2
		Lead	7439-92-1	NA	0.51
		Nickel	7440-02-0	NA	0.32
		Silver	7440-22-4	NA	0.072
F012	Table CCW in 268.43	Cadmium	7440-43-9	NA	0.066
		Chromium (Total)	7440-47-32	NA	5.2
		Lead	7439-92-1	NA	0.51
		Nickel	7440-02-0	NA	0.32
		Silver	7440-22-4	NA	0.072
F019	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	5.2
F020-F023 and F026-F028 dioxin containing wastes.*		HxCDD-All Hexachlorodibenzo-p-dioxins		<1 ppb	<1 ppb
		HxCDF-All Hexachlorodibenzofurans		<1 ppb	<1 ppb
		PeCDD-All Pentachlorodibenzo-p-dioxins		<1 ppb	<1 ppb
		PeCDF-All Pentachlorodibenzofurans		<1 ppb	<1 ppb
		TCDD-All Tetrachlorodibenzo-p-dioxins		<1 ppb	<1 ppb
		TCDF-All Tetrachlorodibenzofurans		<1 ppb	<1 ppb
		2,4,5-Trichlorophenol	95-95-4	<0.05 ppm	<0.05 ppm
		2,4,6-Trichlorophenol	88-06-2	<0.05 ppm	<0.05 ppm
		2,3,4,6-Tetrachlorophenol	58-90-2	<0.05 ppm	<0.05 ppm
		Pentachlorophenol	87-86-5	<0.01 ppm	<0.01 ppm
F024	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	0.073
		Lead	7439-92-1	NA	0.021

		Nickel	7440-02-0	NA	0.088
F039	Table CCW in 268.43	Antimony	7440-36-0	NA	0.23
		Arsenic	7440-38-2	NA	5.0
		Barium	7440-39-3	NA	52
		Cadmium	7440-43-9	NA	0.066
		Chromium (Total)	7440-47-32	NA	5.2
		Lead	7439-92-1	NA	0.51
		Mercury	7439-97-6	NA	0.025
		Nickel	7440-02-0	NA	0.32
		Selenium	7782-49-2	NA	5.7
		Silver	7440-22-4	NA	0.072
K001	Table CCW in 268.43	Lead	7439-92-1	NA	0.51
K002	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	0.094
		Lead	7439-92-1	NA	0.37
K003	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	0.094
		Lead	7439-92-1	NA	0.37
K004	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	0.094
		Lead	7439-92-1	NA	0.37
K005	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	0.094
		Lead	7439-92-1	NA	0.37
K006 (anhydrous)	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	0.094
		Lead	7439-92-1	NA	0.37
K006 (hydrated)	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	5.2
K007	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	0.094
		Lead	7439-92-1	NA	0.37
K008	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	0.094
		Lead	7439-92-1	NA	0.37
K015	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	1.7
		Lead	7439-92-1	NA	0.2
K021	Table CCW in 268.43	Antimony	7440-36-0	NA	0.23#
K022	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	5.2
		Nickel	7440-02-2	NA	0.32
K028	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	0.073
		Lead	7439-92-1	NA	0.021
		Nickel	7440-02-0	NA	0.088
K031	Table CCW in 268.43	Arsenic	7440-38-2	NA	5.6#
K046	Table CCW in 268.43	Lead	7439-92-1	NA	0.18
K048	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	1.7
		Nickel	7440-02-0	NA	0.20
K049	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	1.7
		Nickel	7440-02-0	NA	0.20
K050	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	1.7
		Nickel	7440-02-0	NA	0.20
K051	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	1.7
		Nickel	7440-02-0	NA	0.20
K052	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	1.7

		Nickel	7440-02-0	NA	0.20
K061 (Low Zinc Subcategory -- less than 15% Total Zinc)	Table CCW in 268.43	Cadmium	7440-43-9	NA	0.14
		Chromium (Total)	7440-47-32	NA	5.2
		Lead	7439-92-1	NA	0.24
		Nickel	7440-02-0	NA	0.32
K062	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	0.094
		Lead	7439-92-1	NA	0.37
K069 (Calcium Sulfate Subcategory)	Table 2 in 268.42 and Table CCW in 268.43	Cadmium	7440-43-9	NA	0.14
		Lead	7439-92-1	NA	0.24
K071 (Low Mercury Subcategory -- less than 16 mg/kg Mercury)	Table CCW in 268.43	Mercury	7439-97-6	NA	0.025
K083	Table CCW in 268.43	Nickel	7440-02-0	NA	0.088
K084	Table CCW in 268.43	Arsenic	7440-38-2	NA	5.6#
K086	Table CCW in 268.43	Chromium (Total)	7440-47-32	NA	0.094
		Lead	7439-92-1	NA	0.37
K087	Table CCW in 268.43	Lead	7439-92-1	NA	0.51
K100	Table CCW in 268.43	Cadmium	7440-43-9	NA	0.066
		Chromium (Total)	7440-47-32	NA	5.2
		Lead	7439-92-1	NA	0.51
K101	Table CCW in 268.43	Arsenic	7440-38-2	NA	5.6#
K102	Table CCW in 268.43	Arsenic	7440-38-2	NA	5.6#
K106 (Low Mercury Subcategory -- less than 260 mg/kg Mercury -- residues from RMERC)	Table 2 in 268.42 and Table CCW in 268.43	Mercury	7439-97-6	NA	0.20
K106 (Low Mercury Subcategory -- less than 260 mg/kg Mercury -- that are not residues from RMERC)	Table 2 in 268.42 and Table CCW in 268.43	Mercury	7439-97-6	NA	0.025
K115	Table CCW	Nickel	7440-02-0	NA	0.32

FOOTNOTE: # -- These treatment standards have been based on EP Leachate analysis but this does not preclude the use of TCLP analysis.

FOOTNOTE: * -- These waste codes are not subcategorized into wastewaters and nonwastewaters.

FOOTNOTE: NA -- Not Applicable.

Table CCWE. -- Constituent Concentrations for Waste Extracts

Waste code	See also	Commercial chemical name	Regulated hazardous constituent	CAS number for regulated hazardous constituent	Waste-waters concen-tration (mg/l)	Nonwaste-waters concen-tration (mg/l)
P010	Table CCW in 268.43	Arsenic acid	Arsenic	7440-38-2	NA	5.6
P011	Table CCW in 268.43	Arsenic pentoxide	Arsenic	7440-38-2	NA	5.6
P012	Table CCW in 268.43	Arsenic trioxide	Arsenic	7440-38-2	NA	5.6
P013	Table CCW in 268.43	Barium cyanide	Barium	7440-39-3	NA	52
P036	Table CCW in 268.43	Dichlorophenylarsine	Arsenic	7440-38-2	NA	5.6
P038	Table CCW in 268.43	Diethylarsine	Arsenic	7440-38-2	NA	5.6
P065 (Low Mercury Subcategory -- less than 260 mg/kg Mercury-residues from RMERC)	Table 2 in 268.42 and Table CCW in 268.43	Mercury fulminate	Mercury	7439-97-6	NA	0.20
P065 (Low Mercury Subcategory -- less than 260 mg/kg Mercury-incinerator residues (and are not residues from RMERC))	Table 2 in 268.42 and Table CCW in 268.43	Mercury fulminate	Mercury	7439-97-6	NA	0.025
P073	Table CCW in 268.43	Nickel carbonyl	Nickel	7440-02-0	NA	0.32
P074	Table CCW in 268.43	Nickel cyanide	Nickel	7440-02-0	NA	0.32
P092 (Low Mercury Subcategory -- less than 260 mg/kg Mercury residues from RMERC)	Table 2 in 268.42 and Table CCW in 268.43	Phenyl mercury acetate	Mercury	7439-97-6	NA	0.20
P092 (Low Mercury Subcategory -- less than 260 mg/kg Mercury-incinerator residues (and are not residues from RMERC))	Table 2 in 268.42 and Table CCW in 268.43	Phenyl mercury acetate	Mercury	7439-97-6	NA	0.025
P099	Table CCW in 268.43	Potassium silver cyanide	Silver	7440-22-4	NA	0.072
P103	Table CCW in 268.43	Selenourea	Selenium	7782-49-2	NA	5.7
P104	Table CCW in 268.43	Silver cyanide	Silver	7440-22-4	NA	0.072
P110	Table CCW in 268.43	Tetraethyl lead	Lead	7439-92-1	NA	0.51
P114	Table CCW in 268.43	Thallium selenite	Selenium	7782-49-2	NA	5.7
U032	Table CCW in 268.43	Calcium chromate	Chromium (Total)	7440-47-32	NA	0.094
U051	Table CCW in 268.43	Creosote	Lead	7439-92-1	NA	0.51

U136	Table CCW in 268.43	Cacodylic acid	Arsenic	7440-38-2	NA	5.6
U144	Table CCW in 268.43	Lead acetate	Lead	7439-92-1	NA	0.51
U145	Table CCW in 268.43	Lead phosphate	Lead	7439-92-1	NA	0.51
U146	Table CCW in 268.43	Lead subacetate	Lead	7439-92-1	NA	0.51
U151 (Low Mercury Subcategory -- less than 260 mg/kg Mercury -- residues from RMERC)	Table CCW in 268.43 and in Table 2 in 268.42	Mercury	Mercury	7439-97-6	NA	0.20
U151 (Low Mercury Subcategory -- less than 260 mg/kg Mercury -- that are not residues from RMERC)	Table CCW in 268.43 and Table 2 in 268.42	Mercury	Mercury	7439-97-6	NA	0.025
U204	Table CCW in 268.43	Selenium dioxide	Selenium	7782-49-2	NA	5.7
U205	Table CCW in 268.43	Selenium sulfide	Selenium	7782-49-2	NA	5.7

FOOTNOTE: -- These treatment standards have been based on EP Leachate analysis but this does not preclude the use of TCLP analysis.

FOOTNOTE: * -- These waste codes are not subcategorized into wastewaters and nonwastewaters.

FOOTNOTE: NA -- Not Applicable.

(b) 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.

[51 FR 40642, Nov. 7, 1986; 52 FR 21017, June 4, 1987, as amended at 53 FR 31217, Aug. 17, 1988; 54 FR 26649, June 23, 1989; 55 FR 22689, June 1, 1990]

§ 268.42 Treatment standards expressed as specified technologies.

(a) The following wastes in paragraphs (a)(1) and (a)(2) of this section and in Table 2 and Table 3 of this section 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 § 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 C treatment standard for specific HOC (such as a hazardous waste chlorinated solvent for which a treatment standard is established under § 268.41(a)).

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.
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 of 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 parameter 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.

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 wastes 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).

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 Beryllium.

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 of 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).

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 6 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/crystallization (including freeze crystallization); 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 defined in 40 CFR 260.10, paragraphs (1), (6), (7), (11), and (12), under the definition of ''industrial furnaces''.

RZINC Resmelting in for the purpose of recovery of zinc high temperature metal recovery units.

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 Steam 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.

FOOTNOTE: 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 § 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.

FOOTNOTE: 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.

Table 2. -- Technology-Based Standards by RCRA Waste Code

Waste code	See also	Waste descriptions and/or treatment subcategory	CAS No. for regulated hazardous constituents	Technology code: Wastewaters	Technology code: Nonwastewaters
D001		Ignitable Liquids based on 261.21(a)(1) -- Wastewaters	NA	DEACT	NA.
D001		Ignitable Liquids based on 261.21(a)(1) -- Low TOC Ignitable Liquids Subcategory -- Less than 10% total organic carbon	NA	NA	DEACT.
D001		Ignitable Liquids based on 261.21(a)(1) -- High TOC Ignitable Liquids Subcategory -- Greater than or equal to 10% total organic carbon	NA	NA	FSUBS; RORGS; or INCIN.
D001		Ignitable compressed gases based on 261.21(a)(3)	NA	NA	DEACT**.
D001		Ignitable reactives 261.21(a)(2)	NA	NA	DEACT.
D001		Oxidizers based on 261.21(a)(4)	NA	DEACT	DEACT.
D002		Acid subcategory based on 261.22(a)(1)	NA	DEACT	DEACT.
D002		Alkaline subcategory based on 261.22(a)(1)	NA	DEACT	DEACT.
D002		Other corrosives based on 261.22(a)(2)	NA	DEACT	DEACT.
D003		Reactive sulfides based on 261.23(a)(5)	NA	DEACT	DEACT.
D003		Explosives based on 261.23(a) (6), (7), and (8)	NA	DEACT	DEACT.
D003		Water reactives based on 261.23(a) (2), (3), and (4)	NA	NA	DEACT.
D003		Other reactives based on 261.23(a)(1)	NA	DEACT	DEACT.
D006		Cadmium containing batteries	7440-43-9	NA	RTHRM.
D008		Lead acid batteries (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).)	7439-92-1	NA	RLEAD.
D009	Table CCWE in 268.41 and Table CCW in 268.43	Mercury: (High Mercury Subcategory -- greater than or equal to 260 mg/kg total Mercury -- contains mercury and organics (and are not incinerator residues))	7439-97-6	NA	IMERC; or RMERC.
D009	Table CCWE in 268.41 and Table CCW in 268.43	Mercury: (High Mercury Subcategory -- greater than or equal to 260 mg/kg total Mercury -- inorganics (including incinerator residues and	7439-97-6	NA	RMERC.

		residues from RMERC))			
D012	Table CCW in 268.43	Endrin	72-20-8	BIODG; or INCIN	NA.
D013	Table CCW in 268.43	Lindane	58-89-9	CARBN; or INCIN	NA.
D014	Table CCW in 268.43	Methoxychlor	72-43-5	WETOX; or INCIN	NA.
D015	Table CCW in 268.43	Toxaphene	8001-35-1	BIODG; or INCIN	NA.
D016	Table CCW in 268.43	2,4-D	94-75-7	CHOXD; BIODG; or INCIN	NA.
D017	Table CCW in 268.43	2,4,5-TP	93-72-1	CHOXD; or INCIN	NA.
F005	Table CCWE in 268.41 and Table CCW in 268.43	2-Nitropropane	79-46-9	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
F005	Table CCWE in 268.41 and Table CCW in 268.43	2-Ethoxyethanol	110-80-5	BIODG: or INCIN	INCIN.
F024	Table CCWE in 268.41 and Table CCW in 268.43		NA	INCIN	INCIN.
K025		Distillation bottoms from the production of nitrobenzene by the nitration of benzene	NA	LLEXT fb SSTRP fb CARBN; or INCIN	INCIN.
K026		Stripping still tails from the production of methyl ethyl pyridines	NA	INCIN	INCIN.
K027		Centrifuge and distillation residues from toluene diisocyanate production	NA	CARBN; or INCIN	FSUBS; or INCIN.
K039		Filter cake from the filtration of diethylphosphorodithioc acid in the production of phorate	NA	CARBN; or INCIN	FSUBS; or INCIN.
K044		Wastewater treatment sludges from the manufacturing and processing of explosives	NA	DEACT	DEACT.
K045		Spent carbon from the treatment of wastewater containing explosives	NA	DEACT	DEACT.
K047		Pink/red water from TNT operations	NA	DEACT	DEACT.
K061	Table CCW in 268.43	Emission control dust/sludge from the primary production of steel in electric furnaces (High Zinc Subcategory -- greater than or equal to 15% total Zinc)	NA	NA	NLDBR.
K069	Table CCWE in 268.41 and Table CCW in 268.43	Emission control dust/sludge from secondary lead smelting: Non-Calcium Sulfate Subcategory	NA	NA	RLEAD.
K106	Table CCWE in 268.41 and Table CCW in 268.43	Wastewater treatment sludge from the mercury cell process in chlorine production: (High Mercury Subcategory-greater than or equal to 260 mg/kg total mercury)	NA	NA	RMERC.
K113		Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene	NA	CARBN; or INCIN	FSUBS; or INCIN.
K114		Vicinals from the purification of toluenediame	NA	CARBN; or INCIN	FSUBS; or INCIN.

		in the production of toluenediamine via hydrogenation of dinitrotoluene			
K115		Heavy ends from the purification of toluenediame in the production of toluenediamine via hydrogenation of dinitrotoluene	NA	CARBN; or INCIN	FSUBS; or INCIN.
K116		Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine	NA	CARBN; or INCIN	FSUBS; or INCIN.
P001		Warfarin (>0.3%)	81-81-2	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
P002		1-Acetyl-2-thiourea	591-08-2	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P003		Acrolein	107-02-8	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
P005		Allyl alcohol	107-18-6	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
P006		Aluminum phosphide	20859-73-8	CHOXD; CHRED; or INCIN	CHOXD; CHRED; or INCIN.
P007		5-Aminoethyl 3-isoxazolol	2763-96-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P008		4-Aminopyridine	504-24-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P009		Ammonium picrate	131-74-8	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN.
P014		Thiophenol (Benzene thiol)	108-98-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P015		Beryllium dust	7440-41-7	NA	RMETL; or RTHRM.
P016		Bis(chloromethyl)ether	542-88-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P017		Bromoacetone	598-31-2	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P018		Brucine	357-57-3	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P022	Table CCW in 268.43	Carbon disulfide	75-15-0	NA	INCIN.
P023		Chloroacetaldehyde	107-20-0	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P026		1-(o-Chlorophenyl) thiourea	5344-82-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P027		3-Chloropropionitrile	542-76-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P028		Bensyl chloride	100-44-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P031		Cyanogen	460-19-5	CHOXD; WETOX; or INCIN	CHOXD; WETOX; or INCIN.
P033		Cyanogen chloride	506-77-4	CHOXD; WETOX; or INCIN	CHOXD; WETOX; or INCIN.

P034		2-Cyclohexyl-4,6-dinitrophenol	131-89-5	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
P040		O,O-Diethyl O-pyrazinyl phosphorothioate	297-97-2	CARBN; or INCIN		FSUBS; or INCIN.
P041		Diethyl-p-nitrophenyl phosphate	311-45-5	CARBN; or INCIN		FSUBS; or INCIN.
P042		Epinephrine	51-43-4	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
P043		Diisopropylfluorophosphate (DFP)	55-91-4	CARBN; or INCIN		FSUBS; or INCIN.
P044		Dimethoate	60-51-5	CARBN; or INCIN		FSUBS; or INCIN.
P045		Thiofanox	39196-18-4	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
P046		alpha, alpha-Dimethylphenethylamine	122-09-8	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
P047		4,6-Dinitro-o-cresol salts	534-52-1	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
P049		2,4-Dithiobiuret	541-53-7	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
P054		Aziridine	151-56-4	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
P056	Table CCW in 268.43	Fluorine	7782-41-4	NA		ADGAS fb NEUTR.
P057		Fluoroacetamide	640-19-7	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
P058		Fluoroacetic acid, sodium salt	62-74-8	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
P062		Hexaethyltetraphosphate	757-58-4	CARBN; or INCIN		FSUBS; or INCIN.
P064		Isocyanic acid, ethyl ester	624-83-9	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
P065	Table CCWE in 268.41 and Table CCW in 268.43	Mercury fulminate: (High Mercury Subcategory -- greater than or equal to 260 mg/kg total Mercury -- either incinerator residues or residues from RMERC)	628-86-4	NA		RMERC.
P065	Table CCWE in 268.41 and Table CCW in 268.43	Mercury fulminate: (All nonwastewaters that are not incinerator residues from RMERC; regardless of Mercury Content)	628-86-4	NA		IMERC.
P066		Methomyl	16752-77-5	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
P067		2-Methylaziridine	75-55-8	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
P068		Methyl hydrazine	60-34-4	CHOXD; CHRED; CARBN; BIODG; or INCIN		FSUBS; CHOXD; CHRED; or INCIN.
P069		Methyllactonitrile	75-86-5	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
P070		Aldicarb	116-06-3	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
P072		1-Naphthyl-2-thiourea	86-88-4	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
P075		Nicotine and salts	54-11-5*	(WETOX or CHOXD)	fb	INCIN.

				CARBN; or INCIN	
P076		Nitric oxide	10102-43-9	ADGAS	ADGAS.
P078		Nitrogen dioxide	10102-44-0	ADGAS	ADGAS.
P081		Nitroglycerin	55-63-0	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN.
P082	Table CCW in 268.43	N-Nitrosodimethylamine	62-75-9	NA	INCIN.
P084		N-Nitrosomethylvinylamine	4549-40-0	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P085		Octamethylpyrophosphoramide	152-16-9	CARBN; or INCIN	FSUBS; or INCIN.
P087		Osmium tetroxide	20816-12-0	NA	RMETL; or RTHRM.
P088		Endothall	145-73-3	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
P092	Table CCWE in 268.41 and Table CCW in 268.43	Phenyl mercury acetate: (High Mercury Subcategory -- greater than or equal to 260 mg/kg total Mercury -- either incinerator residues or residues from RMERC)	62-38-4	NA	RMERC.
P092	Table CCWE in 268.41 and Table CCW in 268.43	Phenyl mercury acetate: (All nonwastewaters that are not incinerator residues and are not residues from RMERC: regardless of Mercury Content)	62-38-4	NA	IMERC; or RMERC.
P093		N-Phenylthiouea	103-85-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P095		Phosgene	75-44-5	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P096		Phosphine	7803-51-2	CHOXD; CHRED; or INCIN	CHOXD; CHRED; or INCIN.
P102		Propargyl alcohol	107-19-7	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
P105		Sodium azide	26628-22-8	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN.
P108		Strychnine and salts	57-24-9*	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P109		Tetraethyldithiopyrophosphate	3689-24-5	CARBN; or INCIN	FSUBS; or INCIN.
P112		Tetranitromethane	509-14-8	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN.
P113	Table CCW in 268.43	Thallic oxide	1314-32-5	NA	RTHRM; or STABL.
P115	Table CCW in 268.43	Thallium (I) sulfate	7446-18-6	NA	RTHRM; or STABL.
P116		Thiosemicarbazide	79-19-6	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P118		Trichloromethanethiol	75-70-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
P119	Table CCW in 268.43	Ammonium vanadate	7803-55-6	NA	STABL.
P120	Table CCW in 268.43	Vanadium pentoxide	1314-62-1	NA	STABL.
P122		Zinc Phosphide (<10%)	1314-84-7	CHOXD; CHRED; or INCIN	CHOXD; CHRED; or INCIN.
U001		Acetaldehyde	75-07-0	(WETOX or CHOXD) fb	FSUBS; or INCIN.

				CARBN; or INCIN		
U003	Table CCW in 268.43	Acetonitrile	75-05-8	NA		INCIN.
U006		Acetyl Chloride	75-36-5	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U007		Acrylamide	79-06-1	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U008		Acrylic acid	79-10-7	(WETOX or CHOXD) CARBN; or INCIN	fb	FSUBS; or INCIN.
U010		Mitomycin C	50-07-7	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U011		Amitrole	61-82-5	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U014		Auramine	492-80-8	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U015		Azaserine	115-02-6	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U016		Benz(c)acridine	225-51-4	(WETOX or CHOXD) CARBN; or INCIN	fb	FSUBS; or INCIN.
U017		Benzal chloride	98-87-3	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U020		Benzenesulfonyl chloride	98-09-9	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U021		Benzidine	92-87-5	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U023		Benzotrichloride	98-07-7	CHOXD; CHRED; CARBN; BIODG; or INCIN		FSUBS; CHOXD; CHRED; or INCIN.
U026		Chlornaphazin	494-03-1	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U033		Carbonyl fluoride	353-50-4	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U034		Trichloroacetaldehyde (Chloral)	75-87-6	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U035		Chlorambucil	305-03-3	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U038	Table CCW in 268.43	Chlorobenzilate	510-15-6	NA		INCIN.
U041		1-Chloro-2,3-epoxypropane (Epichlorohydrin)	106-89-8	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U042	Table CCW in 268.43	2-Chloroethyl vinyl ether	110-75-8	NA		INCIN.
U046		Chloromethyl methyl ether	107-30-2	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U049		4-Chloro-o-toluidine hydrochloride	3165-93-3	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U053		Crotonaldehyde	4170-30-3	(WETOX or CHOXD) CARBN; or INCIN	fb	FSUBS; or INCIN.
U055		Cumene	98-82-8	(WETOX or CHOXD) CARBN; or INCIN	fb	FSUBS; or INCIN.

U056		Cyclohexane	110-82-7	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
U057	Table CCW in 268.43	Cyclohexanone	108-94-1	NA	FSUBS; or INCIN.
U058		Cyclophosphamide	50-18-0	CARBN; or INCIN	FSUBS; or INCIN.
U059		Daunomycin	20830-81-3	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U062		Diallate	2303-16-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U064		1,2,7,8-Dibenzopyrene	189-55-9	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
U073		3,3'-Dichlorobenzidine	91-94-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U074		cis-1,4-Dichloro-2-butene trans-1,4-Dichloro-2-butene	1476-11-5	(WETOX or CHOXD) fb CARBN; or INCIN (WETOX or CHOXD) fb CARBN; or INCIN	INCIN INCIN.
U085		1,2:3,4-Diepoxybutane	1464-53-5	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
U086		N,N-Diethylhydrazine	1615-80-1	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN.
U087		O,O-Diethyl S-methyldithiophosphate	3288-58-2	CARBN; or INCIN	FSUBS; or INCIN.
U089		Diethyl stilbestrol	56-53-1	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
U090		Dihydrosafrole	94-58-6	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
U091		3,3'-Dimethoxybenzidine	119-90-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U092		Dimethylamine	124-40-3	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U093	Table CCW in 268.43	p-Dimethylaminoazobenzene	621-90-9	NA	INCIN.
U094		7,12-Dimethyl benz(a)anthracene	57-97-6	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
U095		3,3'-Dimethylbenzidine	119-93-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U096		a,a-Dimethyl benzyl hydroperoxide	80-15-9	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN.
U097		Dimethylcarbomyl chloride	79-44-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U098		1,1-Dimethylhydrazine	57-14-7	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN.
U099		1,2-Dimethylhydrazine	540-73-8	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN.
U103		Dimethyl sulfate	77-78-1	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN.
U109		1,2-Diphenylhydrazine	122-66-7	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN.

U110		Dipropylamine	142-84-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U113		Ethyl acrylate	140-88-5	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
U114		Ethylene bis-dithiocarbamic acid	111-54-6	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U115		Ethylene oxide	75-21-8	(WETOX or CHOXD) fb CARBN; or INCIN	CHOXD; or INCIN.
U116		Ethylene thiourea	96-45-7	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U119		Ethyl methane sulfonate	62-50-0	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U122		Formaldehyde	50-00-0	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
U123		Formic acid	64-18-6	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
U124		Furan	110-00-9	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
U125		Furfural	98-01-1	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
U126		Glycidaldehyde	765-34-4	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
U132		Hexachlorophenene	70-30-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U133		Hydrazine	302-01-2	CHOXD; CHRED; CARBN; BIODG; or INCIN	FSUBS; CHOXD; CHRED; or INCIN.
U134	Table CCW in 268.43	Hydrogen Fluoride	7664-39-3	NA	ADGAS fb NEUTR; or NEUTR.
U135		Hydrogen Sulfide	7783-06-4	CHOXD; CHRED, or INCIN	CHOXD; CHRED; or INCIN.
U143		Lasiocarpine	303-34-4	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U147		Maleic anhydride	108-31-6	(WETOX or CHOXD) fb CARBN; or INCIN	FSUBS; or INCIN.
U148		Maleic hydrazide	123-33-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U149		Malononitrile	109-77-3	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U150		Melphalan	148-82-3	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U151	Table CCWE in 268.41 and Table CCW in 268.43	Mercury: (High Mercury Subcategory -- greater than or equal to 260 mg/kg total Mercury)	7439-97-6	NA	RMERC.
U153		Methane thiol	74-93-1	(WETOX or CHOXD) fb CARBN; or INCIN	INCIN.
U154		Methanol	67-56-1	(WETOX or CHOXD) fb	FSUBS; or INCIN.

U156		Methyl chlorocarbonate	79-22-1	CARBN; or INCIN (WETOX or CHOXD)	fb	INCIN.
U160		Methyl ethyl ketone peroxide	1338-23-4	CARBN; or INCIN CHOXD; CHRED; CARBN; BIODG; or INCIN		FSUBS; CHOXD; CHRED; or INCIN.
U163		N-Methyl N'-nitro N-Nitrosoguanidine	70-25-7	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U164		Methylthiouracil	56-04-2	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U166		1,4-Naphthoquinone	130-15-4	(WETOX or CHOXD) CARBN; or INCIN	fb	FSUBS; or INCIN.
U167		1-Naphthlyamine	134-32-7	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U168	Table CCW in 268.43	2-Naphthlyamine	91-59-8	NA		INCIN.
U171		2-Nitropropane	79-46-9	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U173		N-Nitroso-di-n-ethanolamine	1116-54-7	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U176		N-Nitroso-N-ethylurea	759-73-9	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U177		N-Nitroso-N-methylurea	684-93-5	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U178		N-Nitroso-N-methylurethane	615-53-2	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U182		Paraldehyde	123-63-7	(WETOX or CHOXD) CARBN; or INCIN	fb	FSUBS; or INCIN.
U184		Pentachloroethane	76-01-7	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U186		1,3-Pentadiene	504-60-9	(WETOX or CHOXD) CARBN; or INCIN	fb	FSUBS; or INCIN.
U189		Phosphorus sulfide	1314-80-3	CHOXD; CHRED; or INCIN		CHOXD; CHRED; or INCIN.
U191		2-Picoline	109-06-8	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U193		1,3-Propane sultone	1120-71-4	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U194		n-Propylamine	107-10-8	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U197		p-Benzoquinone	106-51-4	(WETOX or CHOXD) CARBN; or INCIN	fb	FSUBS; or INCIN.
U200		Reserpine	50-55-5	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U201		Resorcinol	108-46-3	(WETOX or CHOXD) CARBN; or INCIN	fb	FSUBS; or INCIN.
U202		Saccharin and salts	81-07-2*	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.

U206		Streptozatocin	18883-66-4	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U213		Tetrahydrofuran	109-99-9	(WETOX or CHOXD) CARBN; or INCIN	fb	FSUBS; or INCIN.
U214	Table CCW in 268.43	Thallium (I) acetate	563-68-8	NA		RTHRM; or STABL.
U215	Table CCW in 268.43	Thallium (I) carbonate	6533-73-9	NA		RTHRM; or STABL.
U216	Table CCW in 268.43	Thallium (I) chloride	7791-12-0	NA		RTHRM; or STABL.
U217	Table CCW in 268.43	Thallium (I) nitrate	10102-45-1	NA		RTHRM; or STABL.
U218		Thioacetamide	62-55-5	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U219		Thiourea	62-56-6	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U221		Toluenediamine	25376-45-8	CARBN; or INCIN		FSUBS; or INCIN.
U222		o-Toluidine hydrochloride	636-21-5	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U223		Toluene diisocyanate	26471-62-5	CARBN; or INCIN		FSUBS; or INCIN.
U234		sym-Trinitrobenzene	99-35-4	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U236		Trypan Blue	72-57-1	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U237		Uracil mustard	66-75-1	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U238		Ethyl carbamate	51-79-6	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U240		2,4-Dichlorophenoxyacetic (salts and esters)	94-75-7*	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U244		Thiram	137-26-8	(WETOX or CHOXD) CARBN; or INCIN	fb	INCIN.
U246		Cyanogen bromide	506-68-3	CHOXD; WETOX; or INCIN		CHOXD; WETOX; or INCIN.
U248		Warfarin (greater than or equal to 3%)	81-81-2	(WETOX or CHOXD) CARBN; or INCIN	fb	FSUBS; or INCIN.
U249		Zinc Phosphide (<10%)	1314-84-7	CHOXD; CHRED; or INCIN		CHOXD; CHRED; or INCIN.

FOOTNOTE: *CAS Number given for parent compound only.

FOOTNOTE: **This waste code exists in gaseous form and is not categorized as wastewater or nonwastewater forms.

FOOTNOTE: NA -- Not Applicable.

Table 3. -- Technology-Based Standards for Specific Radioactive Hazardous Mixed Waste

Waste code	Waste descriptions and/or treatment subcategory	CAS Number	Technology code: Wastewaters	Technology code: Nonwastewaters
D002	Radioactive High Level Wastes Generated During the Reprocessing of Fuel Rods Subcategory	NA	NA	HLVIT
D004	Radioactive High Level Wastes Generated During the Reprocessing of Fuel Rods Subcategory	NA	NA	HLVIT
D005	Radioactive High Level Wastes Generated During the Reprocessing of Fuel Rods Subcategory	NA	NA	HLVIT
D006	Radioactive High Level Wastes Generated During the Reprocessing of Fuel Rods Subcategory	NA	NA	HLVIT
D007	Radioactive High Level Wastes Generated During the Reprocessing of Fuel Rods Subcategory	NA	NA	HLVIT
D008	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.)	7439-92-1	NA	MACRO
D008	Radioactive High Level Wastes Generated During the Reprocessing of Fuel Rods Subcategory	NA	NA	HLVIT
D009	Elemental mercury contaminated with radioactive materials	7439-97-6	NA	AMLGM
D009	Hydraulic oil contaminated with Mercury Radioactive Materials Subcategory	7439-97-6	NA	INCIN
D009	Radioactive High Level Wastes Generated During the Reprocessing of Fuel Rods Subcategory	NA	NA	HLVIT
D010	Radioactive High Level Wastes Generated During the Reprocessing of Fuel Rods Subcategory	NA	NA	HLVIT
D011	Radioactive High Level Wastes Generated During the Reprocessing of Fuel Rods Subcategory	NA	NA	HLVIT
U151	Mercury: Elemental mercury contaminated with radioactive materials	7439-97-6	NA	AMLGM

FOOTNOTE: NA -- Not Applicable.

(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 achievable by methods specified in paragraphs (a), (c), and (d) of this section. 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. 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) All hazardous wastes contained in such lab packs are specified in appendix IV or appendix V 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 with treatment standards specified in Table 3 of this section are not subject to any treatment standards specified in § 268.41, § 268.43, or Table 2 of this section. Radioactive hazardous mixed wastes not subject to treatment standards in Table 3 of this section remain subject to all applicable treatment standards specified in § 268.41, § 268.43, and Table 2 of this section.

[51 FR 40642, Nov. 7, 1986, as amended at 52 FR 25790, July 8, 1987; 53 FR 31218, Aug. 17, 1988; 54 FR 26649, June 23, 1989; 55 FR 22692, June 1, 1990]

§ 268.43 Treatment standards expressed as waste concentrations.

(a) Table CCW identifies the restricted wastes and the concentrations of their associated hazardous constituents which may not be exceeded by the waste or treatment residual (not an extract of such waste or residual) for the allowable land disposal of such waste or residual. Compliance with these concentrations is required based upon grab samples, unless otherwise noted in the following Table CCW.

Table CCW. -- Constituent Concentrations in Wastes

Waste code	See also	Regulated hazardous constituent	CAS No. for regulated hazardous constituent
D003 (Reactive cyanides subcategory -- based on 261.23(a)(5))		Cyanides (Total)	57-12-5
		Cyanides (Amenable)	57-12-5
D004	Table CCWE in 268.41	Arsenic	7440-38-2
D005	Table CCWE in 268.41	Barium	7440-39-3
D006	Table CCWE in 268.41	Cadmium	7440-43-9
D007	Table CCWE in 268.41	Chromium (Total)	7440-47-32
D008	Table CCWE in 268.41	Lead	7439-92-1
D009	Table CCWE in 268.41	Mercury	7439-97-6
D010	Table CCWE in 268.41	Selenium	7782-49-2
D011	Table CCWE in 268.41	Silver	7440-22-4
D012	Table 2 in 268.42	Endrin	720-20-8
D013	Table 2 in 268.42	Lindane	58-89-9
D014	Table 2 in 268.42	Methoxychlor	72.43-5
D015	Table 2 in 268.42	Toxaphene	8001-35-1
D016	Table 2 in 268.42	2,4-D	94-75-7
D017	Table 2 in 268.42	2,4,5-TP Silvex	93-76-5
F001-F005 spent solvents	Table CCWE in 268.41 and Table 2 in 268.42	1,1,2-Trichloroethane	71-55-6
		Benzene	71-43-2
F001-F005 spent solvents (Pharmaceutical industry wastewater subcategory)		Methylene chloride	75-09-2
F006	Table CCWE in 268.41	Cyanides (Total)	57-12-5
		Cyanides (Amenable)	57-12-5
		Cadmium	7440-43-9
		Chromium	7440-47-32
		Lead	7439-92-1
		Nickel	7440-02-0
F007	Table CCWE in 268.41	Cyanides (Total)	57-12-5
		Cyanides (Amenable)	57-12-5
		Chromium (Total)	7440-47-32
		Lead	7439-92-1
		Nickel	7440-02-0
F008	Table CCWE in 268.41	Cyanides (Total)	57-12-5
		Cyanides (Amenable)	57-12-5
		Chromium	7440-47-32
		Lead	7439-92-1
		Nickel	7440-02-0
F009	Table CCWE in 268.41	Cyanides (Total)	57-12-5
		Cyanides (Amenable)	57-12-5
		Chromium	7440-47-32
		Lead	7439-92-1
		Nickel	7440-02-0
F010		Cyanides (Total)	57-12-5
		Cyanides (Amenable)	57-12-5
F011	Table CCWE in 268.41	Cyanides (Total)	57-12-5
		Cyanides (Amenable)	57-12-5
		Chromium (Total)	7440-47-32
		Lead	7439-92-1
		Nickel	7440-02-0
F012	Table CCWE in 268.41	Cyanides (Total)	57-12-5
		Cyanides (Amenable)	57-12-5

		Chromium (Total)	7440-47-32
		Lead	7439-92-1
		Nickel	7440-02-0
F019	Table CCWE in 268.41	Cyanides (Total)	57-12-5
		Cyanides (Amenable)	57-12-5
		Chromium (Total)	7440-47-32
F024	Table CCWE in 268.41 and Table 2 in 268.42 (Note: F024 organic standards must be treated via incineration (INCIN))	2-Chloro-1,3-butadiene	126-99-8
		3-Chloropropene	107-05-1
		1,1-Dichloroethane	75-34-3
		1,2-Dichloroethane	107-06-2
		1,2-Dichloropropane	78-87-5
		cis-1,3-Dichloropropene	10061-01-5
		trans-1,3-Dichloropropene	10061-02-6
		Bis(2-ethylhexyl)phthalate	117-81-7
		Hexachloroethane	67-72-1
		Chromium (Total	7440-47-32
		Nickel	7440-02-0
F025 (Light ends subcategory)		Chloroform	67-66-3
		1,2-Dichloroethane	107-06-2
		1,1-Dichloroethylene	75-35-4
		Methylene chloride	75-9-2
		Carbon tetrachloride	56-23-5
		1,1,2-Trichloroethane	79-00-5
		Trichloroethylene	79-01-6
		Vinyl chloride	75-01-4
F025 (Spent filters/aids and desiccants subcategory)		Chloroform	67-66-3
		Methylene chloride	75-9-2
		Carbon tetrachloride	56-23-5
		1,1,2-Trichloroethane	79-00-5
		Trichloroethylene	79-01-6
		Vinyl chloride	75-01-4
		Hexachlorobenzene	118-74-1
		Hexachlorobutadiene	87-68-3
		Hexachloroethane	67-72-1
F039	Table CCWE in 268.41	Acetone	67-64-1
		Acenaphtalene	208-96-8
		Acenaphthene	83-32-9
		Acetonitrile	75-05-8
		Acetophenone	96-86-2
		2-Acetylaminofluorene	53-96-3
		Acrylonitrile	107-13-1
		Aldrin	309-00-2
		4-Aminobiphenyl	92-67-1
		Aniline	62-53-3
		Anthracene	120-12-7
		Aroclor 1016	12674-11-2
		Aroclor 1221	11104-28-2
		Aroclor 1232	11141-16-5
		Aroclor 1242	53469-21-9
		Aroclor 1248	12672-29-6
		Aroclor 1254	11097-69-1
		Aroclor 1260	11096-82-5
		alpha-BHC	319-84-6
		beta-BHC	319-85-7
		delta-BHC	319-86-8

gamma-BHC	58-89-9
Benzene	71-43-2
Benzo(a)anthracene	56-55-3
Benzo(b)fluoranthene	205-99-2
Benzo(k)fluoranthene	207-08-9
Benzo(g,h,i)perylene	191-24-2
Benzo(a)pyrene	50-32-8
Bromodichloromethane	75-27-4
Bromoform	75-25-2
Bromomethane (methyl bromide)	74-83-9
4-Bromophenyl phenyl ether	101-55-3
n-Butyl alcohol	71-36-3
Butyl benzyl phthalate	85-68-7
2-sec-Butyl-4,6-dinitrophenol	88-85-7
Carbon tetrachloride	56-23-5
Carbon disulfide	75-15-0
Chlordane	57-74-9
p-Chloroaniline	106-47-8
Chlorobenzene	108-90-7
Chlorobenzilate	510-15-6
Chlorodibromomethane	124-48-1
Chloroethane	75-00-3
bis(2-Chloroethoxy) methane	111-91-1
bis(2-Chloroethyl) ether	111-44-4
2-Chloroethyl vinyl ether	
Chloroform	67-66-3
bis(2-Chloroisopropyl) ether	39638-32-9
p-Chloro-m-cresol	59-50-7
Chloromethane (Methyl chloride)	74-87-3
2-Chloronaphthalene	91-8-7
2-Chlorophenol	95-57-8
3-Chloropropene	107-05-1
Chrysene	218-01-9
o-Cresol	95-48-7
Cresol (m- and p-isomers)	
Cyclohexanone	108-94-1
1,2-Dibromo-3-chloropropane	96-12-8
1,2-Dibromoethane (Ethylene dibromide)	106-93-4
Dibromomethane	74-95-3
2,4-Dichlorophenoxyacetic acid (2,4-D)	94-75-7
o,p'-DDD	53-19-0
p,p'-DDD	72-54-8
o,p'-DDE	3424-82-6
p,p'-DDE	72-55-9
o,p'-DDT	789-02-6
p,p'-DDT	50-29-3
Dibenzo(a,h)anthracene	53-70-3
m-Dichlorobenzene	541-73-1
o-Dichlorobenzene	95-50-1
p-Dichlorobenzene	106-46-7
Dichlorodifluoromethane	75-71-8
1,1-Dichloroethane	75-34-3
1,2-Dichloroethane	107-06-2
1,1-Dichloroethylene	75-35-4
trans-1,2-Dichloroethene	
2,4-Dichlorophenol	120-83-2
2,6-Dichlorophenol	87-65-0
1,2-Dichloropropane	78-87-5
cis-1,3-Dichloropropene	10061-01-5
trans-1,3-Dichloropropene	10061-02-6
Dieldrin	60-57-1
Diethyl phthalate	84-66-2
p-Dimethylaminoazobenzene	60-11-3
2,4-Dimethyl phenol	105-67-9
Dimethyl phthalate	131-11-3

Di-n-butyl phthalate	84-74-2
1,4-Dinitrobenzene	100-25-4
4,6-Dinitro-o-cresol	534-52-1
2,4-Dinitrophenol	51-28-5
2,4-Dinitrotoluene	121-14-2
2,6-Dinitrotoluene	606-20-2
Di-n-octyl phthalate	117-84-0
Di-n-propylnitrosoamine	621-64-7
1,2-Diphenyl hydrazine	
1,4-Dioxane	123-91-1
Disulfoton	298-04-4
Endosulfan I	939-98-8
Endosulfan II	33213-6-5
Endosulfan sulfate	1-31-07-8
Endrin	7-20-8
Endrin aldehyde	7421-93-4
Ethyl acetate	141-78-6
Ethyl cyanide	
Ethyl benzene	100-41-4
Ethyl ether	60-29-7
bis(2-Ethylhexyl) phthalate	117-81-7
Ethyl methacrylate	97-63-2
Ethylene oxide	75-21-8
Famphur	52-85-7
Fluoranthene	206-44-0
Fluorene	86-73-7
Fluorotrichloromethane	75-69-4
Heptachlor	76-44-8
Heptachlor epoxide	1024-57-3
Hexachlorobenzene	118-74-1
Hexachlorobutadiene	87-68-3
Hexachlorocyclopentadiene	77-47-4
Hexachlorodibenzo-furans	
Hexachlorodibenzo-p-dioxins	
Hexachloroethane	67-72-1
Hexachloropropene	1888-71-7
Indeno(1,2,3,-c,d)pyrene	193-39-5
Iodomethane	74-88-4
Isobutanol	78-83-1
Isodrin	465-73-6
Isosafrole	120-58-1
Kepone	143-50-8
Methacrylonitrile	126-98-7
Methapyrilene	91-80-5
Methoxychlor	72-43-5
3-Methylcholanthrene	56-49-5
4,4-Methylene-bis-(2-chloroaniline)	101-14-4
Methylene chloride	75-09-2
Methyl ethyl ketone	78-93-3
Methyl isobutyl ketone	108-10-1
Methyl methacrylate	80-62-6
Methyl methansulfonate	
Methyl parathion	298-00-0
Naphthalene	91-20-3
2-Naphtylamine	91-59-8
p-Nitroaniline	100-01-6
Nitrobenzene	98-95-3
5-Nitro-o-toluidine	99-55-8
4-Nitrophenol	100-02-7
N-Nitrosodiethylamine	55-18-5
N-Nitrosodimethylamine	62-75-9
N-Nitroso-di-n-butylamine	924-16-3
N-Nitrosomethylethylamine	10595-95-6
N-Nitrosomorpholine	59-89-2
N-Nitrosopiperidine	100-75-4

		N-Nitrosopyrrolidine	930-55-2
		Parathion	56-38-2
		Pentachlorobenzene	608-93-5
		Pentachlorodibenzo-furans	
		Pentachlorodibenzo-p-dioxins	
		Pentachloronitrobenzene	82-68-8
		Pentachlorophenol	87-86-5
		Phenacetin	62-44-2
		Phenanthrene	85-01-8
		Phenol	108-95-2
		Phorate	298-02-2
		Propanenitrile (ethyl cyanide)	107-12-0
		Pronamide	23950-58-5
		Pyrene	129-00-0
		Pyridine	110-86-1
		Safrole	94-59-7
		Silvex (2,4,5-TP)	93-72-1
		2,4,5-T	93-76-5
		1,2,4,5,-Tetrachlorobenzene	95-94-3
		Tetrachlorodibenzo-furans	
		Tetrachlorodibenzo-p-dioxins	
		2,3,7,8-Tetrachlorodibenzo-p-dioxin	
		1,1,1,2-Tetrachloroethane	630-20-6
		1,1,2,2-Tetrachloroethane	79-34-6
		Tetrachloroethene	127-18-4
		2,3,4,6-Tetrachlorophenol	58-90-2
		Toluene	108-88-3
		Toxaphene	8001-35-1
		1,2,4-Trichlorobenzene	120-82-1
		1,1,1-Trichloroethane	71-55-6
		1,1,2-Trichloroethane	79-00-5
		Trichloroethylene	79-01-6
		2,4,5-Trichlorophenol	95-95-4
		2,4,6-Trichlorophenol	88-06-2
		1,2,3-Trichloropropane	96-18-4
		1,1,2-Trichloro-1,2,2-trifluoro-ethane	76-13-1
		Vinyl chloride	75-01-4
		Xylene(s)	
		Cyanides (Total)	57-12-5
		Cyanides (Amenable)	57-12-5
		Fluoride	16964-48-8
		Sulfide	8496-25-8
		Antimony	7440-36-0
		Arsenic	7440-38-2
		Barium	7440-39-3
		Beryllium	7440-41-7
		Cadmium	7440-43-9
		Chromium (Total)	7440-47-32
		Copper	7440-50-8
		Lead	7439-92-1
		Mercury	7439-97-6
		Nickel	7440-02-0
		Selenium	7782-49-2
		Silver	7440-22-4
		Vanadium	7440-62-2
K001	Table CCWE in 268.41	Naphthalene	91-20-3
		Pentachlorophenol	87-86-5
		Phenanthrene	85-01-8
		Pyrene	129-00-0
		Toluene	108-88-3
		Xylenes (Total)	
		Lead	7439-92-1
K002	Table CCWE in 268.41	Chromium (Total)	7440-47-32
		Lead	7439-92-1
K003	Table CCWE in 268.41	Chromium (Total)	7440-47-32

		Lead	7439-92-1
K004	Table CCWE in 268.41	Chromium (Total)	7440-47-32
		Lead	7439-92-1
K005	Table CCWE in 268.41	Chromium (Total)	7440-47-32
		Lead	7439-92-1
		Cyanides (Total)	57-12-5
K006	Table CCWE in 268.41	Chromium (Total)	7440-47-32
		Lead	7439-92-1
K007	Table CCWE	Chromium (Total)	7440-47-32
		Lead	7439-92-1
		Cyanides (Total)	57-12-5
K008	Table CCWE in 268.41	Chromium (Total)	7440-47-32
		Lead	7439-92-1
K009		Chloroform	67-66-3
K010		Chloroform	67-66-3
K011		Acetonitrile	75-05-8
		Acrylonitrile	107-13-1
		Acrylamide	79-06-1
		Benzene	71-43-2
		Cyanide (Total)	57-12-5
K013		Acetonitrile	75-05-8
		Acrylonitrile	107-13-1
		Acrylamide	79-06-1
		Benzene	71-43-2
		Cyanide (Total)	57-12-5
K014		Acetonitrile	75-05-8
		Acrylonitrile	107-13-1
		Acrylamide	79-06-1
		Benzene	71-43-2
		Cyanide (Total)	57-12-5
K015	Table CCWE in 268.41	Anthracene	120-12-7
		Benzal chloride	98-87-3
		Sum of Benzo(b)fluoranthene and	205-99-2
		Benzo(k)fluoranthene	207-08-9
		Phenanthrene	85-01-8
		Toluene	108-88-3
		Chromium (Total)	7440-47-32
		Nickel	7440-02-0
K016		Hexachlorobenzene	118-74-1
		Hexachlorobutadiene	87-68-3
		Hexachlorocyclopentadiene	77-47-4
		Hexachloroethane	67-72-1
		Tetrachloroethene	127-18-4
K017		1,2-Dichloropropane	78-87-5
		1,2,3-Trichloropropane	96-18-4
		Bis(2-chloroethyl)ether	111-44-4
K018		Chloroethane	75-00-3
		1,1-Dichloroethane	75-34-3
		1,2-Dichloroethane	107-06-2
		Hexachloroethane	67-72-1
		Hexachlorobutadiene	87-68-3
		Hexachloroethane	67-72-1
		Pentachloroethane	76-01-7
		1,1,1-Trichloroethane	71-55-6
K019		Bis(2-chloroethyl)ether	111-44-4
		Chlorobenzene	108-90-7
		Chloroform	67-66-3
		p-Dichlorobenzene	106-46-7
		1,2-Dichloroethane	107-06-2
		Fluorene	86-73-7
		Hexachloroethane	67-72-1
		Naphthalene	91-20-3
		Phenanthrene	85-01-8
		1,2,4,5-Tetrachlorobenzene	95-94-3
		Tetrachloroethene	127-18-4

		1,2,4-Trichlorobenzene	120-82-1
		1,1,1-Trichloroethane	71-55-6
K020		1,2-Dichloroethane	106-93-4
		1,1,2,2-Tetrachloroethane	79-34-6
		Tetrachloroethene	127-18-4
K021	Table CCWE in 268.41	Chloroform	67-66-3
		Carbon tetrachloride	56-23-5
		Antimony	7440-36-0
K022	Table CCWE in 268.41	Toluene	108-88-3
		Acetophenone	96-86-2
		Diphenylamine	22-39-4
		Diphenylnitrosamine	86-30-6
		Sum of Diphenylamine and Diphenylnitrosamine	
		Phenol	108-95-2
		Chromium (Total)	7440-47-32
		Nickel	7440-02-0
K023		Phthalic anhydride (measured as Phthalic acid)	85-44-9
K024		Phthalic anhydride (measured as Phthalic acid)	85-44-9
K028	Table CCWE in 268.41	1,1-Dichloroethane	75-34-3
		trans-1,2-Dichloroethane	
		Hexachlorobutadiene	87-68-3
		Hexachloroethane	67-72-1
		Pentachloroethane	76-01-7
		1,1,1,2-Tetrachloroethane	630-20-6
		1,1,2,2-Tetrachloroethane	79-34-6
		1,1,1-Trichloethane	71-55-6
		1,1,2-Trichlorethane	79-00-5
		Tetrachloroethylene	127-18-4
		Cadmium	7440-43-9
		Chromium (Total)	7440-47-32
		Lead	7439-92-1
		Nickel	7440-02-0
K029		Chloroform	67-66-3
		1,2-Dichloroethane	107-06-2
		1,1-Dichloroethylene	75-35-4
		1,1,1-Trichloroethane	71-55-6
		Vinyl chloride	75-01-4
K030		o-Dichlorobenzene	95-50-1
		p-Dichlorobenzene	106-46-7
		Hexachlorobutadiene	87-68-3
		Hexachlorobutadiene	67-72-1
		Hexachloropropene	1888-71-7
		Pentachlorobenzene	608-93-5
		Pentachloroethane	76-01-7
		1,2,4,5-Tetrachlorobenzene	95-94-3
		Tetrachloroethane	127-18-4
		1,2,4-Trichlorobenzene	120-82-1
K031	Table CCWE in 268.41	Arsenic	7440-38-2
K032		Hexachloropentadiene	77-47-4
		Chlordane	57-74-9
		Heptachlor	76-44-8
		Heptachlor epoxide	1024-57-3
K033		Hexachlorocyclopentadiene	77-47-4
K034		Hexachlorocyclopentadiene	77-47-4
K035		Acenaphthene	83-32-9
		Anthracene	120-12-7
		Benz(a)anthracene	56-55-3
		Benzo(a)pyrene	50-32-8
		Chrysene	218-01-9
		Dibenz(a,h)anthracene	53-70-3
		Fluoranthene	206-44-0
		Fluorene	86-73-7
		Indeno(1,2,3-cd)pyrene	193-39-5

		Cresols (m- and p-isomers)	
		Naphthalene	91-20-3
		o-cresol	95-48-7
		Phenanthrene	85-01-8
		Phenol	108-95-2
		Pyrene	129-00-0
K036		Disulfoton	298-04-4
K037		Disulfoton	298-04-4
		Toluene	108-88-3
K038		Phorate	298-02-2
K040		Phorate	298-02-2
K041		Toxaphene	8001-35-1
K042		1,2,4,5-Tetrachlorobenzene	95-94-3
		o-Dichlorobenzene	95-50-1
		p-Dichlorobenzene	106-46-7
		Pentachlorobenzene	608-93-5
		1,2,4-Trichlorobenzene	120-82-1
K043		2,4-Dichlorophenol	120-83-2
		2,6-Dichlorophenol	87-65-0
		2,4,5-Trichlorophenol	95-95-4
		2,4,6-Trichlorophenol	88-06-2
		Tetrachlorophenols (Total)	
		Pentachlorophenol	87-86-5
		Tetrachloroethene	79-01-6
		Hexachlorodibenzo-p-dioxins	
		Hexachlorodibenzo-furans	
		Pentachlorodibenzo-p-dioxins	
		Pentachlorodibenzo-furans	
		Tetrachlorodibenzo-p-dioxins	
		Tetrachlorodibenzo-furans	
K046	Table CCWE in 268.41	Lead	7439-92-1
K048	Table CCWE in 268.41	Benzene	71-43-2
		Benzo(a)pyrene	50-32-8
		Bis(2-ethylhexyl)phthalate	117-81-7
		Chrysene	218-01-9
		Di-n-butyl phthalate	84-74-2
		Ethylbenzene	100-41-4
		Fluorene	86-73-7
		Naphthalene	91-20-3
		Phenanthrene	85-01-8
		Phenol	108-95-2
		Pyrene	129-00-0
		Toluene	108-88-3
		Xylene(s)	
		Cyanides (Total)	57-12-5
		Chromium (Total)	7440-47-32
		Lead	7439-92-1
K049	Table CCWE in 268.41	Anthracene	120-12-7
		Benzene	71-43-2
		Benzo(a)pyrene	50-32-8
		Bis(2-ethylhexyl)phthalate	117-81-7
		Carbon disulfide	75-15-0
		Chrysene	2218-01-9
		2,4-Dimethylphenol	105-67-9
		Ethylbenzene	100-41-4
		Naphthalene	91-20-3
		Phenanthrene	85-01-8
		Phenol	108-95-2
		Pyrene	129-00-0
		Toluene	108-88-3
		Xylene(s)	
		Cyanides (Total)	57-12-5
		Chromium (Total)	7440-47-32
		Lead	7439-92-1
K050	Table CCWE in 268.41	Benzo(a)pyrene	50-32-8

		Phenol	108-95-2
		Cyanides (Total)	57-12-5
		Chromium (Total)	7440-47-32
		Lead	7439-92-1
K051	Table CCWE in 268.41	Acenaphthene	208-96-8
		Anthracene	120-12-7
		Benzene	71-43-2
		Benzo(a)anthracene	50-32-8
		Benzo(a)pyrene	117-81-7
		Bis(2-ethylhexyl)phthalate	75-15-0
		Chrysene	2218-01-9
		Di-n-butyl phthalate	105-67-9
		Ethylbenzene	100-41-4
		Fluorene	86-73-7
		Naphthalene	91-20-3
		Phenanthrene	85-01-8
		Phenol	108-95-2
		Pyrene	129-00-0
		Toluene	108-88-3
		Xylene(s)	
		Cyanides (Total)	57-12-5
		Chromium (Total)	7440-47-32
		Lead	7439-92-1
K052	Table CCWE in 268.41	Benzene	71-43-2
		Benzo(a)pyrene	50-32-8
		o-Cresol	95-48-7
		p-Cresol	106-44-5
		2,4-Dimethylphenol	105-67-9
		Ethylbenzene	100-41-4
		Naphthalene	91-20-3
		Phenanthrene	85-01-8
		Phenol	108-95-2
		Toluene	108-88-3
		Xylenes	
		Cyanides (Total)	57-12-5
		Chromium (Total)	7440-47-32
		Lead	7439-92-1
K060		Benzene	71-43-2
		Benzo(a)pyrene	50-32-8
		Naphthalene	91-20-3
		Phenol	108-95-2
		Cyanides (Total)	57-12-5
K061	Table CCWE in 268.41 and Table 2 in 268.42	Cadmium	7440-43-9
		Chromium (Total)	7440-47-32
		Lead	7439-92-1
		Nickel	7440-02-0
K062	Table CCWE in 268.41	Chromium (Total)	7440-47-32
		Lead	7439-92-1
		Nickel	7440-02-0
K069	Table CCWE in 268.41 and Table 2 in 268.42	Cadmium	7440-43-9
		Lead	7439-92-1
K071	Table CCWE in 268.41	Mercury	7439-97-6
K073		Carbon tetrachloride	56-23-5
		Chloroform	67-66-3
		Hexachloroethane	67-72-1
		Tetrachloroethene	127-18-4
		1,1,1-Trichloroethane	71-55-6
K083	Table CCWE in 268.41	Benzene	71-43-2
		Aniline	62-53-3
		Diphenylamine	22-39-4
		Diphenylnitrosamine	86-30-6

		Sum of Diphenylamine and Diphenylnitrosamine	
		Nitrobenzene	98-95-3
		Phenol	108-95-2
		Cyclohexanone	108-94-1
K084		Nickel	7440-02-0
K085		Arsenic	7440-38-2
		Benzene	71-43-2
		Chlorobenzene	108-90-7
		o-Dichlorobenzene	95-50-1
		m-Dichlorobenzene	541-73-1
		p-Dichlorobenzene	106-46-7
		1,2,4-Trichlorobenzene	120-82-1
		1,2,4,5-Tetrachlorobenzene	95-94-3
		Pentachlorobenzene	608-93-5
		Hexachlorobenzene	118-74-1
		Aroclor 1016	12674-1, 2
		Aroclor 1221	11104-28-2
		Aroclor 1232	11141-16-5
		Aroclor 1242	53469-21-9
		Aroclor 1248	12672-29-6
		Aroclor 1254	11097-69-1
		Aroclor 1260	11096-82-5
K086	Table CCWE in 268.41	Acetone	67-64-1
		Acetophenone	96-86-2
		Bis(2-ethylhexyl)phthalate	117-81-7
		n-Butyl alcohol	71-36-3
		Butylbenzylphthalate	85-68-7
		cyclohexanone	108-94-1
		1,2-Dichlorobenzene	95-50-1
		Diethyl phthalate	84-66-2
		Dimethyl phthalate	131-11-3
		Di-n-butyl phthalate	84-74-2
		Di-n-octyl phthalate	117-84-0
		Ethyl acetate	141-78-6
		Ethylbenzene	100-41-4
		Methanol	67-56-1
		Methyl isobutyl ketone	108-10-1
		Methyl ethyl ketone	78-93-3
		Methylene chloride	75-09-2
		Naphthalene	91-20-3
		Nitrobenzene	98-95-3
		Toluene	108-88-3
		1,1,1-Trichloroethane	71-55-6
		Trichloroethylene	79-01-6
		Xylenes (Total)	
		Cyanides (Total)	57-12-5
		Chromium (Total)	7440-47-32
		Lead	7439-92-1
K087	Table CCWE in 268.41	Acenaphthalene	208-96-8
		Benzene	71-43-2
		Chrysene	218-01-9
		Fluoranthene	206-44-0
		Indeno(1,2,3-cd)pyrene	193-39-5
		Naphthalene	91-20-3
		Phenanthrene	85-01-8
		Toluene	108-88-3
		Xylenes	
		Lead	7439-92-1
K093		Phthalic anhydride (measured as Phthalic acid)	85-44-9
K094		Phthalic anhydride (measured as Phthalic acid)	85-44-9
K095		1,1,1,2-Tetrachloroethane	630-20-6
		1,1,2,2-Tetrachloroethane	79-34-6
		Tetrachloroethene	127-18-4
		1,1,2-Trichloroethane	79-00-5
		Trichloroethylene	79-01-6

		Hexachloroethane	67-72-1
		Pentachloroethane	76-01-7
K096		1,1,1,2-Tetrachloroethane	630-20-6
		1,1,2,2-Tetrachloroethane	79-34-6
		Tetrachloroethene	127-18-4
		1,1,2-Trichloroethane	79-00-5
		Trichloroethene	79-01-6
		1,3-Dichlorobenzene	541-73-1
		Pentachloroethane	76-01-7
		1,2,4-Trichlorobenzene	120-82-1
K097		Hexachlorocyclopentadiene	77-47-4
		Chlordane	57-74-9
		Heptachlor	76-44-8
		Heptachlor epoxide	1024-57-3
K098		Toxaphene	8001-35-1
K099		2,4-Dichlorophenoxyacetic acid	94-75-7
		Hexachlorodibenzo-p-dioxins	
		Hexachlorodibenzofurans	
		Pentachlorodibenzo-p-dioxins	
		Pentachlorodibenzofurans	
		Tetrachlorodibenzo-p-dioxins	
		Tetrachlorodibenzofurans	
K100	Table CCWE in 268.41	Cadmium	7440-43-9
		Chromium (Total)	7440-47-32
		Lead	7439-92-1
K101		o-Nitroaniline	
		Arsenic	7440-38-2
		Cadmium	7440-43-9
		Lead	7439-92-1
		Mercury	7439-97-6
K102	Table CCWE in 268.41	o-Nitrophenol	
		Arsenic	7440-38-2
		Cadmium	7440-43-9
		Lead	7439-92-1
		Mercury	7439-97-6
K103		Aniline	62-53-3
		Benzene	71-43-2
		2,4-Dinitrophenol	51-28-5
		Nitrobenzene	98-95-3
		Phenol	108-95-2
K104		Aniline	62-53-3
		Benzene	71-43-2
		2,4-Dinitrophenol	51-28-5
		Nitrobenzene	98-95-3
		Phenol	108-95-2
		Cyanides (Total)	57-12-5
K105		Benzene	71-43-2
		Chlorobenzene	108-90-7
		o-Dichlorobenzene	95-50-1
		p-Dichlorobenzene	106-46-7
		2,4,5-Trichlorophenol	95-95-4
		2,4,6-Trichlorophenol	88-06-2
		2-Chlorophenol	95-57-8
		Phenol	108-95-2
K106	Table CCWE in 268.41 and Table 2 in 268.42	Mercury	7439-97-6
K115	Table CCWE in 268.41	Nickel	7440-02-0

FOOTNOTE: [a]Treatment standards for this organic constituent were established based upon incineration in units operated in accordance with the technical requirements of 40 CFR Part 264 Subpart O or Part 265 Subpart O, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may certify compliance with these treatment standards according to provisions in 40 CFR Section 268.7.

FOOTNOTE: *Based on analysis of composite samples.

FOOTNOTE: #As analyzed using SW-846 Method 9010; sample size: 0.5-10; distillation time: one hour to one hour and fifteen minutes.

FOOTNOTE: NA -- Not Applicable.

Table CCW. -- Constituent Concentrations in Wastes

Waste code	Commercial chemical name	See also	Regulated hazardous constituent	CAS No. for regulated hazardous constituent	Wastewaters concentration (mg/l)	Nonwastewaters concentration (mg/kg)
P004	Aldrin		Aldrin	309-00-2	*0.21	0.066
P010	Arsenic acid	Table CCWE in 268.41	Arsenic	7440-38-2	0.79	NA
P011	Arsenic pentoxide	Table CCWE in 268.41	Arsenic	7440-38-2	0.79	NA
P012	Arsenic trioxide	Table CCWE in 268.41	Arsenic	7440-38-2	0.79	NA
P013	Barium cyanide	Table CCWE in 268.41	Cyanides (Total)	57-12-5	1.9	110
			Cyanides (Amenable)	57-12-5	0.1	9.1
P020	2-sec-Butyl-4,6-dinitrophenol (Dinoseb)		2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	88-85-7	0.066	a2.5
P021	Calcium cyanide		Cyanides (Total)	57-12-5	1.9	110
			Cyanides (Amenable)	57-12-5	0.1	9.1
P022	Carbon disulfide	Table 2 in 268.42	Carbon disulfide	75-15-0	0.014	NA
P024	p-Chloroaniline		p-Chloroaniline	106-47-8	0.46	a16
P029	Copper cyanide		Cyanides (Total)	57-12-5	1.9	110
			Cyanides (Amenable)	57-12-5	0.1	9.1
P030	Cyanides (soluble salts and complexes)		Cyanides (Total)	57-12-5	1.9	110
			Cyanides (Amenable)	57-12-5	0.1	9.1
P036	Dichlorophenylarsine	Table CCWE in 268.41	Arsenic	7440-38-2	0.79	NA
P037	Dieldrin		Dieldrin	60-57-1	*0.017	a0.13
P038	Diethylarsine	Table CCWE in 268.41	Arsenic	7740-38-2	0.79	NA
P039	Disulfoton		Disulfoton	298-04-4	0.017	a0.1
P047	4,6-Dinitro-o-cresol		4,6-Dinitro-o-cresol	534-52-1	*0.28	a160
P048	2,4-Dinitrophenol		2,4-Dinitrophenol	51-28-5	*0.12	a160
P050	Endosulfan		Endosulfan I	939-98-8	*0.023	a0.066
			Endosulfan II	33213-6-5	*0.029	a0.13
			Endosulfan sulfate	1031-07-8	*0.029	a0.13
P051	Endrin		Endrin	72-20-8	*0.0028	a0.13
			Endrin aldehyde	7421-93-4	*0.025	a0.13
P056	Fluoride	Table 2 in 268.42	Fluoride	16964-48-8	35	NA
P059	Heptachlor		Heptachlor	76-44-8	*0.0012	a0.066
			Heptachlor epoxide	1024-57-3	*0.016	a0.066
P060	Isodrin		Isodrin	465-73-6	*0.021	a0.066

P063	Hydrogen cyanide		Cyanides (Total)	57-12-5	1.9	110
			Cyanides (Amenable)	57-12-5	0.10	9.1
P065	Mercury fulminate	Table CCWE in 268.41 and Table 2 in 268.42	Mercury	7439-97-6	0.030	NA
P071	Methyl parathion		Methyl parathion	298-00-0	0.025	@0.1
P073	Nickel carbonyl	Table CCWE in 268.41	Nickel	7440-02-0	0.44	NA
P074	Nickel cyanide	Table CCWE in 268.41	Cyanides (Table)	57-12-5	1.9	110
			Cyanides (Amenable)	57-12-5	0.10	9.1
			Nickel	7440-02-0	0.44	NA
P077	p-Nitroaniline		p-Nitroaniline	100-01-6	*0.028	@28
P082	N-Nitrosodimethylamine	Table 2 in 268.42	N-Nitrosodimethylamine	62-75-9	*0.40	NA
P089	Parathion		Parathion	56-38-2	0.025	@0.1
P092	Phenylmercury acetate	Table CCWE in 268.41 and Table 2 in 268.42	Mercury	7439-97-6	0.030	NA
P094	Phorate		Phorate	298-02-2	0.025	@0.1
P097	Famphur		Famphur	52-85-7	0.025	@0.1
P098	Potassium cyanide		Cyanides (Total)	57-12-5	1.9	110
			Cyanides (Amenable)	57-12-5	0.10	9.1
P099	Potassium silver cyanide	Table CCWE in 268.41	Cyanides (Total)	57-12-5	1.9	110
			Cyanides (Amenable)	57-12-5	0.1	9.1
			Silver	7440-22-4	0.29	NA
P101	Ethyl cyanide (Propanenitrile)		Ethyl cyanide (Propanenitrile)	107-12-0	*0.24	@360
P103	Selenourea	Table CCWE in 268.41	Selenium	7782-49-2	*1.0	NA
P104	Silver cyanide	Table CCWE in 268.41	Cyanides (Total)	57-12-5	1.9	110
			Cyanides (Amenable)	57-12-5	0.10	9.1
			Silver	7440-22-4	0.29	NA
P106	Sodium cyanide		Cyanides (Total)	57-12-5	1.9	110
			Cyanides (Amenable)	57-12-5	0.10	9.1
P110	Tetraethyl lead	Table CCWE in 268.41 and Table 2 in 268.42	Lead	7439-92-1	0.040	NA
P113	Thallic oxide	Table 2 in 268.42	Thallium	7440-28-0	*0.14	NA
P114	Thallium selenite	Table CCWE in 268.41	Selenium	7782-49-2	1.0	NA
P115	Thallium(I)sulfate	Table 2 in 268.42	Thallium	7440-28-0	*0.14	NA
P119	Ammonia vanadate	Table 2 in 268.42	Vanadium	7440-62-2	*28	NA
P120	Vanadium pentoxide	Table 2 in 268.42	Vanadium	7440-62-2	*28	NA
P121	Zinc cyanide		Cyanides (Total)	57-12-5	1.9	110
			Cyanides (Amenable)	57-12-5	0.10	9.1
P123	Toxaphene		Toxaphene	8001-35-1	*0.0095	@1.3
U002	Acetone		Acetone	67-64-1	0.28	@160
U003	Acetonitrile	Table 2 in 268.42	Acetonitrile	75-05-8	017	NA

U004	Acetophenone		Acetophenone	98-86-2	@0.010	@9.7
U005	2-Acetylaminofluorene		2-Acetylaminofluorene	53-96-3	*0.059	@140
U009	Acrylonitrile		Acrylonitrile	107-13-1	*0.24	@84
U012	Aniline		Aniline	62-53-3	0.81	@14
U018	Benz(a)anthracene		Benz(a)anthracene	56-55-3	*0.059	@8.2
U019	Benzene		Benzene	71-43-2	*0.14	@36
U022	Benzo(a)pyrene		Benzo(a)pyrene	50-32-8	*0.061	@8.2
U024	Bis(2-chloroethoxy)methane		Bis(2-chloroethoxy)methane	111-91-1	0.036	@7.2
U025	Bis(2-chloroethyl)ether		Bis(2-chloroethyl)ether	111-44-4	0.033	@7.2
U027	Bis(2-chloroisopropyl) ether		Bis(2-chloroisopropyl) ether	39638-32-9	*0.055	@7.2
U028	Bis(2-ethylhexyl) pthalate		Bis(2-ethylhexyl) pthalate	117-81-7	@0.54	@28
U029	Bromomethane (Methyl bromide)		Bromomethane (Methyl bromide)	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	Table CCWE in 268.41	Chromium (Total)	7440-47-32	0.32	NA
U036	Chlordane (alpha and gamma)		Chlordane (alpha and gamma)	57-74-9	*0.0033	@0.13
U037	Chlorobenzene		Chlorobenzene	108-90-7	*0.057	@5.7
U038	Chlorobenzilate	Table 2 in 268.42	Chlorobenzilate	510-15-6	*0.10	NA
U039	p-Chloro-m-cresol		p-Chloro-m-cresol	59-50-7	*0.018	@14
U042	2-Chloroethyl vinyl	Table 2 in 268.42	2-Chloroethyl vinyl	110-75-8	0.057	NA
U043	Vinyl chloride		Vinyl chloride	75-01-4	*0.27	@33
U044	Chloroform		Chloroform	67-66-3	*0.046	@5.6
U045	Chloromethane (Methyl chloride)		Chloromethane (Methyl chloride)	74-87-3	*0.19	@33
U047	2-Chloronaphthalene		2-Chloronaphthalene	91-58-7	*0.055	@5.6
U048	2-Chlorophenol		2-Chlorophenol	95-57-8	*0.044	@5.7
U050	Chrysene		Chrysene	218-01-9	*0.059	@8.2
U051	Creosote	Table CCWE in 268.41	Naphthalene	91-20-3	@0.031	@1.5
			Pentachlorophenol	87-86-5	@0.18	@7.4
			Phenanthrene	85-01-8	@0.031	@1.5
			Pyrene	129-00-0	@0.028	@28
			Toluene	108-88-3	@0.028	@33
			Xylenes (Total)	7439-92-1	@0.032	NA
			Lead		@0.037	
U052	Cresols (Cresylic acid)		o-Cresol	95-48-7	*0.11	@5.6
			Cresols (m- and p- isomers)		*0.77	@3.2
U057	Cyclohexanone	Table 2 in 268.42	Cyclohexanone	108-94-1	0.36	NA
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
U063	Dibenzo(a,h)anthracene		Dibenzo(a,h)anthracene	53-70-3	*0.055	@8.2

U066	1,2-Dibromo-3-chloropropane		1,2-Dibromo-3-chloropropane	96-12-8	*0.11	a15
U067	1,2-Dibromoethane (Ethylenedibromide)		1,2-Dibromoethane (Ethylene dibromide)	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	a0.54	a28
U070	o-Dichlorobenzene		o-Dichlorobenzene	95-50-1	*0.088	a6.2
U071	m-Dichlorobenzene		m-Dichlorobenzene	541-73-1	0.036	6.2
U072	p-Dichlorobenzene		p-Dichlorobenzene	104-46-7	*0.090	a6.2
U075	Dichlorodifluoromethane		Dichlorodifluoromethane	75-71-8	*0.23	a7.2
U076	1,1-Dichloroethane		1,1-Dichloroethane	75-34-3	*0.059	7.2
U077	1,2-Dichloroethane		1,2-Dichloroethane	107-06-2	*0.21	a7.2
U078	1,1-Dichloroethylene		1,1-Dichloroethylene	75-35-4	*0.025	a33
U079	1,2-Dichloroethylene		trans-1,2-Dichloroethylene	156-60-5	*0.054	[1]33
U080	Methylene chloride		Methylene chloride	75-09-2	[2]0.089	[1]33
U081	2,4-Dichlorophenol		2,4-Dichlorophenol	120-83-2	[2]0.044	[1]14
U082	2,6-Dichlorophenol		2,6-Dichlorophenol	87-65-0	[2]0.044	[1]14
U083	1,2-Dichloropropane		1,2-Dichloropropane	78-87-5	[2]0.85	[1]18
U084	1,3-Dichloropropene		cis-1,3-Dichloropropylene	10061-01-5	[2]0.036	[1]18
			trans-1,3-Dichloropropylene	10061-02-6	[2]0.036	[1]18
U088	Diethyl phthalate		Diethyl phthalate	84-66-2	[1]0.54	[1]28
U093	p-Dimethylaminoazobenzene	Table 2 in 268.42	p-Dimethylaminoazobenzene	60-11-7	[2]0.13	NA
U101	2,4-Dimethylphenol		2,4-Dimethylphenol	105-67-9	[2]0.036	[1]14
U102	Dimethyl phthalate		Dimethyl phthalate	131-11-3	[1]0.54	[1]28
U105	2,4-Dinitrotoluene		2,4-Dinitrotoluene	121-14-2	[2]0.32	[1]140
U106	2,6-Dinitrotoluene		2,6-Dinitrotoluene	606-20-2	[2]0.55	[1]28
U107	Di-n-octyl phthalate		Di-n-octyl phthalate	117-84-0	[1]0.54	[1]28
U108	1,4-Dioxane		1,4-Dioxane	123-91-1	[2]0.12	[1]170
U111	Di-n-propylnitrosoamine		Di-n-propylnitrosoamine	621-64-7	[2]0.40	[1]14
U112	Ethyl acetate		Ethyl acetate	141-78-6	[2]0.34	[1]33
U117	Ethyl ether		Ethyl ether	60-29-7	[2]0.12	[1]160
U118	Ethyl methacrylate		Ethyl methacrylate	97-63-2	[2]0.14	[1]160
U120	Fluoranthene		Fluoranthene	206-44-0	[2]0.068	[1]8.2
U121	Trichloromonofluoromethane		Trichloromonofluoromethane	75-69-4	[2]0.020	[1]33
U127	Hexachlorobenzene		Hexachlorobenzene	118-74-1	[2]0.055	[1]37
U128	Hexachlorobutadiene		Hexachlorobutadiene	87-68-3	[2]0.055	[1]28
U129	Lindane		alpha-BHC	319-84-6 319-85-7	[2]0.00014	[1]0.066
			beta-BHC	319-86-8 58-89-9	0.00014 0.023	[1]0.066
			Delta-BHC		0.0017	[1]0.066
			gamma-BHC (Lindane)			[1]0.066
U130	Hexachlorocyclopentadiene		Hexachlorocyclopentadiene	77-47-7	[2]0.057	[1]3.6
U131	Hexachloroethane		Hexachloroethane	67-72-1	[2]0.055	[1]28
U134	Hydrogen fluoride	Table 2 in 268.42	Fluoride	16964-48-8	35	NA
U136	Cacodylic acid	Table CCWE in 268.41	Arsenic	7440-38-2	0.79	NA
U137	Indeno(1,2,3-c,d)pyrene		Indeno(1,2,3-c,d)pyrene	193-39-5	[2]0.0055	[1]8.2

U138	Iodomethane		Iodomethane	74-88-4	[2]0.19	[1]65
U140	Isobutyl alcohol		Isobutyl alcohol	78-83-1	5.6	[1]170
U141	Isosafrole		Isosafrole	120-58-1	0.081	[1]2.6
U142	Kepone		Kepone	143-50-8	0.0011	[1]0.13
U144	Lead acetate	Table CCWE in 268.41	Lead	7439-92-1	0.040	NA
U145	Lead phosphate	Table CCWE in 268.41	Lead	7439-92-1	0.040	NA
U146	Lead subacetate	Table CCWE in 268.41	Lead	7439-92-1	0.040	NA
U151	Mercury	Table CCWE in 268.41 and Table 2 in 268.42	Mercury	7439-97-6	0.030	NA
U152	Methacrylonitrile		Methacrylonitrile	126-98-7	[2]0.24	[1]84
U155	Methapyrilene		Methapyrilene	91-80-5	0.081	[1]1.5
U157	3-Methylchloanthrene		3-Methylcholanthrene	56-49-5	[2]0.0055	[1]15
U158	4,4'-Methylenebis (2-chloroaniline)		4,4'-Methylenebis (2-chloroaniline)	101-14-4	[2]0.50	[1]35
U159	Methyl ethyl ketone		Methyl ethyl ketone	78-93-3	0.28	[1]36
U161	Methyl isobutyl ketone		Methyl isobutyl ketone	108-10-1	0.14	[1]33
U162	Methyl methacrylate		Methyl methacrylate	80-62-6	0.14	[1]160
U165	Naphthalene		Naphthalene	91-20-3	[2]0.059	[1]3.1
U168	2-Naphthylamine	Table 2 in 268.42	2-Naphthylamine	91-59-8	[2]0.52	NA
U169	Nitrobenzene		Nitrobenzene	98-95-3	[2]0.068	[1]14
U170	4-Nitrophenol		4-Nitrophenol	100-02-7	[2]0.12	[1]29
U172	n-Nitrosodi-n-butylamine		n-Nitrosodi-n-butylamine	924-16-3	[2]0.40	[1]17
U174	N-Nitrosodiethylamine		n-Nitrosodiethylamine	55-18-5	[2]0.40	[1]28
U179	N-Nitrosopiperidine		n-Nitrosopiperidine	100-75-4	[2]0.013	[1]35
U180	N-Nitrosopyrrolidine		n-Nitrosopyrrolidine	930-55-2	[2]0.013	[1]35
U181	5-Nitro-o-toluidine		5-Nitro-o-toluidine	99-55-8	[2]0.32	[1]28
U183	Pentachlorobenzene		Pentachlorobenzene	608-93-5	[2]0.055	[1]37
U185	Pentachloronitrobenzene		Pentachloronitrobenzene	82-68-8	[2]0.055	[1]4.8
U187	Phenacetin		Phenacetin	62-44-2	0.081	[1]16
U188	Phenol		Phenol	108-95-2	0.039	[1]6.2
U190	Phthalic anhydride (measured as Phthalic acid)		Phthalic anhydride (measured as Phthalic acid)	85-44-9	[1]0.54	[1]28
U192	Pronamide		Pronamide	23950-58-5	0.093	[1]1.5
U196	Pyridine		Pyridine	110-86-1	[2]0.014	[1]16
U203	Safrole		Safrole	94-59-7	0.081	[1]22
U204	Selenium dioxide	Table CCWE in 268.41	Selenium	7782-49-2	1.0	NA
U205	Selenium sulfide	Table CCWE in 268.41	Selenium	7782-49-2	1.0	NA
U207	1,2,4,5-Tetrachlorobenzene		1,2,4,5-Tetrachlorobenzene	95-94-3	[2]0.055	[1]19
U208	1,1,1,2-Tetrachloroethane		1,1,1,2-Tetrachloroethane	630-20-6	0.057	[1]42
U209	1,1,2,2-Tetrachloroethane		1,1,2,2-Tetrachloroethane	79-34-5	[2]0.057	[1]42

U210	Tetrachloroethylene		Tetrachloroethylene	127-18-4	[2]0.056	[1]5.6
U211	Carbon tetrachloride		Carbon tetrachloride	56-23-5	[2]0.057	[1]5.6
U214	Tallium(I)acetate	Table 2 in 268.42	Thallium	7440-28-0	[2]0.14	NA
U215	Thallium(I)carbonate	Table 2 in 268.42	Thallium	7440-28-0	[2]0.14	NA
U216	Thallium(I)chloride	Table 2 in 268.42	Thallium	7440-28-0	[2]0.14	NA
U217	Thallium(I)nitrate	Table 2 in 268.42	Thallium	7440-28-0	[2]0.14	NA
U220	Toluene		Toluene	108-88-3	[2]0.080	[1]28
U225	Tribromomethane (Bromoform)		Tribromomethane (Bromoform)	75-25-2	[2]0.63	[1]15
U226	1,1,1-Trichloroethane		1,1,1-Trichloroethane	71-55-6	[2]0.054	[1]5.6
U227	1,1,2-Trichloroethane		1,1,2-Trichloroethane	79-00-5	[2]0.054	[1]5.6
U228	Trichloroethylene		Trichloroethylene	79-01-6	[2]0.054	[1]5.6
U235	tris-(2,3-Dibromopropyl)-phosphate		tris-(2,3-Dibromopropyl)-phosphate	126-72-7	0.025	[1]0.10
U239	Xylenes		Xylenes		[2]0.32	[1]28
U240	2,4-Dichlorophenoxyacetic acid		2,4-Dichlorophenoxyacetic acid	94-75-7	0.72	[1]10
U243	Hexachloropropene		Hexachloropropene	1888-71-7	[2]0.035	28
U247	Methoxychlor		Methoxychlor	72-43-5	[2]0.25	[1]0.18

FOOTNOTE: [1]Treatment standards for this organic constituent were established based upon incineration in units operated in accordance with the technical requirements of 40 CFR Part 264 Subpart O or Part 265 Subpart O, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may certify compliance with these treatment standards according to provisions in 40 CFR Section 268.7.

FOOTNOTE: [2]Based on analysis of composite samples.

FOOTNOTE: [3]As analyzed using SW-846 Method 9010; sample size: 0.5-10; distillation time: one hour to one hour fifteen minutes.

FOOTNOTE: NA -- Not Applicable.

No Land Disposal for:

K005 Nonwastewaters generated by the process described in the waste listing description, and disposed after June 8, 1989, and not generated in the course of treating wastewater forms of these wastes. (Based on No Generation)

K007 Nonwastewaters generated by the process described in the waste listing description, and disposed after June 8, 1989, and not generated in the course of treating wastewater forms of these wastes. (Based on No Generation)

K021 Nonwastewater forms of these wastes generated by the process described in the waste listing description and disposed after August 17, 1988, and not generated in the course of treating wastewater forms of these wastes (Based on No Generation)

K025 Nonwastewater forms of these wastes generated by the process described in the waste listing description and disposed after August 17, 1988, and not generated in the course of treating wastewater forms of these wastes (Based on No Generation)

K036 Nonwastewater forms of these wastes generated by the process described in the waste listing description and disposed after August 17, 1988, and not generated in the course of treating wastewater forms of these wastes (Based on No Generation)

K044 (Based on Reactivity)

K045 (Based on Reactivity)

K047 (Based on Reactivity)

K060 Nonwastewater forms of these wastes generated by the process described in the waste listing description and disposed after August 17, 1988, and not generated in the course of treating wastewater forms of these wastes (Based on No Generation)

K061 Nonwastewaters -- High Zinc Subcategory (greater than or equal to 15% total zinc) (Based on Recycling): effective 8/8/90

K069 Non-Calcium Sulfate Subcategory -- Nonwastewater forms of these wastes generated by the process described in the waste listing description and disposed after August 17, 1988, and not generated in the course of treating wastewater forms of these wastes (Based on Recycling)

K100 Nonwastewater forms of those wastes generated by the process described in the waste listing description and disposed after August 17, 1988, and not generated in the course of treating wastewater forms of these wastes (Based on No Generation)

(b) 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.

(c) Notwithstanding the prohibitions specified in paragraph (a) of this section, treatment and disposal facilities may demonstrate (and certify pursuant to § 268.7(b)(5)) compliance with the treatment standards for organic constituents specified in this section provided the following conditions are satisified:

(1) The treatment 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 40 CFR part 265, subpart O, or based on combustion in fuel substitution units operating in accordance with applicable technical requirements;

(2) The organic constituents have been treated using the methods referenced in paragraph (c)(1) of this section; and

(3) The treatment or disposal facility has been unable to detect the organic constituents despite using its best good-faith efforts as defined by applicable Agency guidance or standards. Until such guidance or standards are developed, such good-faith efforts may be demonstrated where the treatment or disposal facility has detected the organic constituents at levels within an order of magnitude of the treatment standard specified in this section.

[53 FR 31218, Aug. 17, 1988, as amended at 54 FR 18837, May 2, 1989; 54 FR 26649, June 23, 1989; 55 FR 22701, June 1, 1990]

§ 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.

(b) Each petition must be submitted in accordance with the procedures in § 260.20.

(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 § 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 significantly 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 § 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 requirements for restricted wastes found under § 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.

[51 FR 40642, Nov. 7, 1986; 52 FR 21017, June 4, 1987, as amended at 53 FR 31221, Aug. 17, 1988; 54 FR 36972, Sept. 6, 1989]

Subpart E -- Prohibitions on Storage

§ 268.50 Prohibitions on storage of restricted wastes.

(a) Except as provided 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 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 § 262.34 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 or containers 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 begins, 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 § 264.73 or § 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) A 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 § 268.5, an approved § 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 §§ 268.41, 268.42, and 268.43 or the treatment standards specified under the variance in § 268.44, or, where treatment standards have not been specified, is in compliance with the applicable prohibitions specified in § 268.32 or RCRA section 3004.

(f) Liquid hazardous wastes containing polychlorinated 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 § 268.32 of this part

[51 FR 40642, Nov. 7, 1986; 52 FR 21017, June 4, 1987, as amended at 52 FR 25791, July 8, 1987; 53 FR 31221, Aug. 17, 1988; 54 FR 36972, Sept. 6, 1989]

Appendix I -- Toxicity Characteristic Leaching Procedure (TCLP)

Note: **The TCLP is published in Appendix II of part 261, and reproduced in full in Appendix VIII of the Vermont Hazardous Waste Management Regulations.**

[55 FR 11876, Mar. 29, 1990]

Appendix II -- Treatment Standards (As Concentrations in the Treatment Residual Extract)

[Note: The technologies shown are the basis of the treatment standards. They are not required to be used in meeting the treatment standards]

Constitutents of F001-F005 Spent Solvent Wastewater Wastes	Waste Treatability Groups For F001-F005 Spent Solvent Wastes (mg/l)		
	Technology Basis[1]	Wastewater 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.

[51 FR 40653, Nov. 7, 1986]

Appendix III -- List of Halogenated Organic Compounds Regulated Under § 268.32

In determining the concentration of HOCs in a hazardous waste for purposes of the § 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 § 268.2). Appendix 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

p-Dichlorobenzene
3,3'-Dichlorobenzidine
2,4-Dichlorophenol
2,6-Dichlorophenol
Hexachlorobenzene
Hexachlorobutadiene
Hexachlorocyclopentadiene
Hexachloroethane
Hexachloroprophene
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

[52 FR 25791, July 8, 1987]

Appendix IV -- Organometallic Lab Packs

Hazardous waste with the following EPA waste codes may be placed in an ''organometallic'' or ''Appendix IV lab pack:''

P001, P002, P003, P004, P005, P006, P007, P008, P009, P013, P014, P015, P016, P017, P018, P020, P022, P023, P024, P025, P026, P027, P028, P031, P034, P036, P037, P038, P039, P040, P041, P042, P043, P044, P045, P047, P048, P049, P050, P051, P054, P056, P057, P058, P059, P060, P062, P063, P064, P065, P066, P067, P068, P069, P070, P071, P072, P073, P074, P075, P077, P081, P082, P084, P085, P087, P088, P089, P092, P093, P094, P095, P096, P097, P098, P099, P101, P102, P103, P104, P105, P108, P109, P110, P112, P113, P114, P115, P116, P118, P119, P120, P122, P123

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, U028, 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, U058, U059, U060, U061, U062, U063, U064, U066, U067, U068, U069, U070, U071, U072, U073, U074, U075, U076, U077, U078, U079, U080, U081, U082, U083, U084, U085, U086, U087, U088, U089, U090, U091, U092, U093, U094, U095, U096, U097, U098, U099, U101, U102, U103, U105, U106, U107, U108, U109, U110, U111, U112, U113, U114, U115, U116, U117, U118, U119, U120, U121, U122, U123, U124, U125, U126, U127, U128, U129, U130, U131, U132, U133, U134, U135, U136, U137, U136, U137, U138, U139, U140, U141, U142, U143, U144, U145, U146, U147, U148, U149, U150, U152, U154, U153, U154, U155, U156, U157, U158, U159, U160, U161, U162, 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, U190, 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, U221, U222, U223, U225, U226, U227, U228, U234, U235, U236, U237, U238, U239, U240, U243, U244, U246, U247, U248, U249, U328, U353, U359

F001, F002, F003, F004, F005, F006, F010, F020, F021, F023, F024, F026, F027, F028

K001, K002, K008, K009, K010, K011, K013, K014, K015, K016, K017, K018, K019, K020, K021, K022, K023, K024, K025, K026, K027, K028, K029, K030, K031, K032, K033, K034, K035, K036, K037, K038, K039, K040, K041, K042, K043, K044, K045, K046, K047, K048, K049, K050, K051, K052, K054, K060, K061, K064, K065, K066, K069, K071, K073, K083, K084, K085, K086, K087, K093, K094, K095, K096, K097, K098, K099, K101, K102, K103, K104, K105, K111, K112, K113, K114, K115, K116, K117, K118, K123, K124, K125, K126, K136

D001, D002, D003, D004, D005, D006, D007, D008, D010, D011, D012, D013, D014, D015, D016, D017

U032, U136, U144, U145, U146, U163, U214, U215, U216, U217

[55 FR 22713, June 1, 1990]

Appendix V -- Organic Lab Packs

Hazardous wastes with the following EPA Hazardous Waste Code No. may be placed in an ''organic'' or ''Appendix V:''

P001, P002, P003, P004, P005, P006, P007, P008, P009, P013, P014, P015, P016, P017, P018, P020, P022, P023, P025, P024, P026, P027, P028, P031, P034, P036, P037, P038, P039, P040, P041, P042, P043, P044, P045, P046, P047, P048, P049, P050, P051, P054, P057, P058, P059, P060, P062, P063, P064, P064, P065, P066, P067, P068, P069, P070, P071, P072, P073, P074, P075, P077, P081, P082, P084, P085, P087, P088, P089, P092, P093, P094, P095, P096, P097, P098, P099, P101, P102, P103, P104, P105, P108, P109, P110, P111, P112, P113, P114, P115, P116, P118, P119, P120, P122, P123

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, U028, U029, U030, U031, U033, U034, U035, U036, U037, U038, U039, U041, U042, U043, U044, U045, U046, U047, U048, U049, U050, U051, U052, U053, U055, U056, U057, U058, U059, U060, U061, U062, U063, U064, U066, U067, U068, U069, U070, U071, U072, U073, U074, U075, U076, U077, U078, U079, U080, U081,

U082, U083, U084, U085, U086, U087, U088, U089, U090, U091, U092, U093, U094, U095, U096, U097, U098, U099, U101, U102, U103, U105, U106, U107, U108, U109, U110, U111, U112, U113, U114, U115, U116, U117, U118, U119, U120, U121, U122, U123, U124, U125, U126, U127, U128, U129, U130, U131, U132, U133, U135, U137, U138, U139, U140, U141, U142, U143, U147, U148, U149, U150, 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, U190, U191, U192, U193, U194, U196, U197, U200, U201, U202, U203, U205, U206, U207, U208, U209, U210, U211, U213, U214, U218, U219, U220, U221, U222, U223, U225, U226, U227, U228, U234, U235, U236, U237, U238, U239, U240, U243, U244, U246, U247, U248, U249, U328, U353, U359

F001, F002, F003, F004, F005, F010, F020, F021, F023, F024, F026, F027, F028

K001, K009, K010, K011, K013, K014, K015, K016, K017, K018, K019, K020, K021, K022, K023, K024, K025, K026, K027, K029, K030, K031, K032, K033, K034, K035, K036, K037, K038, K039, K040, K041, K042, K043, K044, K045, K046, K047, K048, K049, K050, K051, K052, K054, K060, K065, K073, K083, K084, K085, K086, K087, K093, K094, K095, K096, K097, K098, K099, K101, K102, K103, K104, K105, K111, K112, K113, K114, K115, K116, K117, K118, K123, K124, K125, K126, K136

D001, D012, D013, D014, D015, D016, D017

[55 FR 22713, June 1, 1990]

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	Nonwastewaters	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	CHOXD

	CHRED INCIN STABL	CHRED INCIN
D003 Water Reactives based on 261.23(a) (2), (3), and (4)	INCIN WTRRX CHOXD CHRED	n.a.
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

FOOTNOTE: Note: ''n.a.'' stands for ''not applicable''; ''fb.'' stands for ''followed by''.

[55 FR 22714, June 1, 1990]

Appendix VII. -- Effective Dates of Surface Disposed Wastes 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	July 8, 1987.

	equal to 2	
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.
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.
California list	Soil and debris HOCs not from CERCLA/RCRA corrective actions	July 8, 1989.
California list	Soil and debris HOCs from CERCLA/RCRA corrective actions	Nov. 8, 1990.
D001	All	Aug. 8, 1990.
D002	All	Aug. 8, 1990.
D003	All	Aug. 8, 1990.
D004	Inorganic solid debris	May 8, 1992.
D004	Nonwastewater	May 8, 1992.
D004	Wastewater	Aug. 8, 1990.
D005	Inorganic solid debris	May 8, 1992.
D005	All others	Aug. 8, 1990.
D006	Inorganic solid debris	May 8, 1992.
D006	All others	Aug. 8, 1990.
D007	Inorganic solid debris	May 8, 1992.
D007	All others	Aug. 8, 1990.
D008	Inorganic solid debris	May 8, 1992.
D008	Lead acid batteries	May 8, 1992.
D008	All others	Aug. 8, 1990.
D009	Inorganic solid debris	May 8, 1992.
D009	High mercury nonwastewater	May 8, 1992.
D009	Low mercury nonwastewater	May 8, 1992.
D009	All others	Aug. 8, 1990.
D010	Inorganic solid debris	May 8, 1992.
D010	All others	Aug. 8, 1990.
D011	Inorganic solid debris	May 8, 1992.
D011	All others	Aug. 8, 1990.
D012	All	Aug. 8, 1990.
D013	All	Aug. 8, 1990.
D0014	All	Aug. 8, 1990.
D0015	All	Aug. 8, 1990.
D0016	All	Aug. 8, 1990.
D0017	All	Aug. 8, 1990.
F001-F005	All, except:	Nov. 8, 1986.
F001-F005	Small quantity generators, CERCLA/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids, and non CERCLA/RCRA corrective action soils with less than 1 percent total solvent constituents	Nov. 8, 1988.
F001-F005	Soil and debris	Nov. 8, 1990.
F002[b]	All	Aug. 8, 1990.
F005[c]	All	Aug. 8, 1990.
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	Soil and debris	June 8, 1991.
F010	All others	June 8, 1989.
F011	All	July 8, 1989.
F012	All	July 8, 1989.
F019	All	Aug. 8, 1990.
F020	Soil and debris	Nov. 8, 1990.
F020	All others	Nov. 8, 1988.
F021	Soil and debris	Nov. 8, 1990.
F021	All others	Nov. 8, 1988.
F022	Soil and debris	Nov. 8, 1990.
F022	All others	Nov. 8, 1988.
F023	Soil and debris	Nov. 8, 1990.
F023	All others	Nov. 8, 1988.
F024	Soil and debris	June 8, 1991.
F024 (metals)	Nonwastewater	Aug. 8, 1990.
F024 (dioxins/furans)	All	Aug. 8, 1990.
F024	All others	June 8, 1989.
F025	All	Aug. 8, 1990.
F026	Soil and debris	Nov. 8, 1990.
F026	All others	Nov. 8, 1988.
F027	Soil and debris	Nov. 8, 1990.
F027	All others	Nov. 8, 1988.
F028	Soil and debris	Nov. 8, 1990.
F028	All others	Nov. 8, 1988.
F039	Wastewater	Aug. 8, 1990.
F039	Nonwastewater	May. 8, 1992.
K001	Soil and debris	Aug. 8, 1990.
K001 (lead/organics)	All	Aug. 8, 1990.
K001	All others	Aug. 8, 1988.
K002	All	Aug. 8, 1990.
K003	All	Aug. 8, 1990.
K004	All	Aug. 8, 1990.
K005[d]	All	Aug. 8, 1990.
K006	All	Aug. 8, 1990.
K007[d]	All	Aug. 8, 1990.
K008	All	Aug. 8, 1990.
K009	Soil and debris	June 8, 1991.
K009	All others	June 8, 1989.
K010	Soil and debris	June 8, 1991.
K010	All others	June 8, 1989.
K011	Wastewater	Aug. 8, 1990.
K011	Nonwastewater	June 8, 1989.
K011	Soil and debris	June 8, 1991.
K013	Wastewater	Aug. 8, 1990.
K013	Nonwastewater	June 8, 1989.
K013	Soil and debris	June 8, 1991.
K014	Wastewater	Aug. 8, 1990.
K014	Nonwastewater	June 8, 1989.
K014	Soil and debris	June 8, 1991.
K015	Wastewater	Aug. 8, 1988.
K015	Nonwastewater	Aug. 8, 1990.
K016	Soil and debris	Aug. 8, 1990.
K016	All others	Aug. 8, 1988.
K017	All	Aug. 8, 1990.
K018	Soil and debris	Aug. 8, 1990.
K018	All others	Aug. 8, 1988.
K019	Soil and debris	Aug. 8, 1990.
K019	All others	Aug. 8, 1988.
K020	Soil and debris	Aug. 8, 1990.
K020	All others	Aug. 8, 1988.
K021[e]	All	Aug. 8, 1990.
K022	Wastewater	Aug. 8, 1990.
K022	Nonwastewater	Aug. 8, 1988.

K022	Soil and debris	Aug. 8, 1990.
K023	Soil and debris	June 8, 1991.
K023	All others	June 8, 1989.
K024	Soil and debris	Aug. 8, 1990.
K024	All others	Aug. 8, 1988.
K025[e]	All	Aug. 8, 1990.
K026	All	Aug. 8, 1990.
K027	Soil and debris	June 8, 1991.
K027	All others	June 8, 1989.
K028	Soil and debris	June 8, 1991.
K028 (metals)	Nonwastewater	Aug. 8, 1990.
K028	All others	June 8, 1989.
K029	Wastewater	Aug. 8, 1990.
K029	Nonwastewater	June 8, 1989.
K029	Soil and debris	June 8, 1991.
K030	Soil and debris	Aug. 8, 1990.
K030	All others	Aug. 8, 1988.
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[e]	All	Aug. 8, 1990.
K037	Soil and debris	Aug. 8, 1990.
K037	Wastewater	Aug. 8, 1990.
K037	All others	Aug. 8, 1988.
K038	Soil and debris	June 8, 1991.
K038	All others	June 8, 1989.
K039	Soil and debris	June 8, 1991.
K039	All others	June 8, 1989.
K040	Soil and debris	June 8, 1991.
K040	All others	June 8, 1989.
K041	All	Aug. 8, 1990.
K042	All	Aug. 8, 1990.
K043	Soil and debris	June 8, 1991.
K043	All others	June 8, 1989.
K044	All	Aug. 8, 1990.
K045	All	Aug. 8, 1990.
K046	Nonreactive nonwastewater	Aug. 8, 1988.
K046	All others	Aug. 8, 1990.
K047	All	Aug. 8, 1990.
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[e]	All	Aug. 8, 1990.
K061	Wastewater	Aug. 8, 1990.
K061	Nonwastewater	Aug. 8, 1988.
K062	All	Aug. 8, 1988.
K069	All	Aug. 8, 1990.
K073	All	Aug. 8, 1990.
K083	All	Aug. 8, 1990.
K084	Wastewater	Aug. 8, 1990.
K084	Nonwastewater	May 8, 1992.
K085	All	Aug. 8, 1990.
K086	All	Aug. 8, 1990.
K087	Soil and debris	Aug. 8, 1990.
K087	All others	Aug. 8, 1988.

K093	Soil and debris	June 8, 1991.
K093	All others	June 8, 1989.
K094	Soil and debris	June 8, 1991.
K094	All others	June 8, 1989.
K095	Wastewater	Aug. 8, 1990.
K095	Nonwastewater	June 8, 1989.
K095	Soil and debris	June 8, 1991.
K096	Wastewater	Aug. 8, 1990.
K096	Nonwastewater	June 8, 1989.
K096	Soil and debris	June 8, 1991.
K097	All	Aug. 8, 1990.
K098	All	Aug. 8, 1990.
K099	All	Aug. 8, 1988.
K100[e]	All	Aug. 8, 1990.
K101	Wastewater	Aug. 8, 1988.
K101	Nonwastewater	May 8, 1992.
K102	Wastewater	Aug. 8, 1988.
K102	Nonwastewater	May 8, 1992.
K103	Soil and debris	Aug. 8, 1990.
K103	All others	Aug. 8, 1988.
K104	Soil and debris	Aug. 8, 1990.
K104	All others	Aug. 8, 1988.
K105	All	Aug. 8, 1990.
K106	High mercury nonwastewater	May 8, 1992.
K106	Low mercury nonwastewater	May. 8, 1992.
K106	All others	Aug. 8, 1990.
K113	Soil and debris	June 8, 1991.
K113	All others	June 8, 1989.
K114	Soil and debris	June 8, 1991.
K114	All others	June 8, 1989.
K115	Soil and debris	June 8, 1991.
K115	All others	June 8, 1989.
K116	Soil and debris	June 8, 1991.
K116	All others	June 8, 1989.
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	All	Aug. 8, 1990.
P009	All	Aug. 8, 1990.
P010	Wastewater	Aug. 8, 1990.
P010	Nonwastewater	May 8, 1992.
P011	Wastewater	Aug. 8, 1990.
P011	Nonwastewater	May 8, 1992.
P012	Wastewater	Aug. 8, 1990.
P012	Nonwastewater	May 8, 1992.
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.
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	Soil and debris	June 8, 1991.
P039	All others	June 8, 1989.
P040	Soil and debris	June 8, 1991.
P040	All others	June 8, 1989.
P041	Soil and debris	June 8, 1991.
P041	All others	June 8, 1989.
P042	All	Aug. 8, 1990.
P043	Soil and debris	June 8, 1991.
P043	All others	June 8, 1989.
P044	Soil and debris	June 8, 1991.
P044	All others	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	Soil and debris	June 8, 1991.
P062	All others	June 8, 1989.
P063	All	June 8, 1989.
P064	All	Aug. 8, 1990.
P065	High mercury nonwastewater	May 8, 1992.
P065	Low mercury nonwastewater	May 8, 1992.
P065	All others	Aug. 8, 1990.
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	Soil and debris	June 8, 1991.
P071	All others	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.
P085	Soil and debris	June 8, 1991.
P085	All others	June 8, 1989.
P087	All	May 8, 1992.
P088	All	Aug. 8, 1990.
P089	Soil and debris	June 8, 1991.
P089	All others	June 8, 1989.
P092	High mercury nonwastewater	May 8, 1992.
P092	Low mercury nonwastewater	May 8, 1992.
P092	All others	Aug. 8, 1990.

P093	Soil and debris	May 8, 1992.
P093	All others	Aug. 8, 1990.
P094	Soil and debris	June 8, 1991.
P094	All others	June 8, 1989.
P095	Soil and debris	May 8, 1992.
P095	All others	Aug. 8, 1990.
P096	All	Aug. 8, 1990.
P097	Soil and debris	June 8, 1991.
P097	All others	June 8, 1989.
P098	All	June 8, 1989.
P099 (silver)	Wastewater	Aug. 8, 1990.
P099 (cyanides).	Wastewater	June 8, 1989.
P099 (cyanides/silver).	Nonwastewater	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 (cyanides).	Wastewater	June 8, 1989.
P104 (cyanides/silver).	Nonwastewater	June 8, 1989.
P105	All	Aug. 8, 1990.
P106	All	June 8, 1989.
P108	Soil and debris	May 8, 1992.
P108	All others	Aug. 8, 1990.
P109	Soil and debris	June 8, 1991.
P109	All others	June 8, 1989.
P110	All	Aug. 8, 1990.
P111	Soil and debris	June 8, 1991.
P111	All others	June 8, 1989.
P112	All	Aug. 8, 1990.
P113	All	Aug. 8, 1990.
P114	All	Aug. 8, 1990.
P115	All	Aug. 8, 1990.
P116	Soil and debris	May 8, 1992.
P116	All others	Aug. 8, 1990.
P118	Soil and debris	May 8, 1992.
P118	All others	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	Soil and debris	May 8, 1992.
U003	All others	Aug. 8, 1990.
U004	All	Aug. 8, 1990.
U005	All	Aug. 8, 1990.
U006	Soil and debris	May 8, 1992.
U006	All others	Aug. 8, 1990.
U007	Soil and debris	May 8, 1992.
U007	All others	Aug. 8, 1990.
U008	All	Aug. 8, 1990.
U009	All	Aug. 8, 1990.
U010	Soil and debris	May 8, 1992.
U010	All others	Aug. 8, 1990.
U011	Soil and debris	May 8, 1992.
U011	All others	Aug. 8, 1990.
U012	All	Aug. 8, 1990.
U014	Soil and debris	May 8, 1992.
U014	All others	Aug. 8, 1990.
U015	Soil and debris	May 8, 1992.
U015	All others	Aug. 8, 1990.
U016	All	Aug. 8, 1990.
U017	Soil and debris	May 8, 1992.
U017	All others	Aug. 8, 1990.

U018	All	Aug. 8, 1990.
U019	All	Aug. 8, 1990.
U020	Soil and debris	May 8, 1992.
U020	All others	Aug. 8, 1990.
U021	Soil and debris	May 8, 1992.
U021	All others	Aug. 8, 1990.
U022	All	Aug. 8, 1990.
U023	All	Aug. 8, 1990.
U024	All	Aug. 8, 1990.
U025	All	Aug. 8, 1990.
U026	Soil and debris	May 8, 1992.
U026	All others	Aug. 8, 1990.
U027	All	Aug. 8, 1990.
U028	Soil and debris	June 8, 1991.
U028	All others	June 8, 1989.
U029	All	Aug. 8, 1990.
U030	All	Aug. 8, 1990.
U031	All	Aug. 8, 1990.
U032	All	Aug. 8, 1990.
U033	Soil and debris	May 8, 1992.
U033	All others	Aug. 8, 1990.
U034	Soil and debris	May 8, 1992.
U034	All others	Aug. 8, 1990.
U035	Soil and debris	May 8, 1992.
U035	All others	Aug. 8, 1990.
U036	All	Aug. 8, 1990.
U037	All	Aug. 8, 1990.
U038	Soil and debris	May 8, 1992.
U038	All others	Aug. 8, 1990.
U039	All	Aug. 8, 1990.
U041	Soil and debris	May 8, 1992.
U041	All others	Aug. 8, 1990.
U042	Soil and debris	May 8, 1992.
U042	All others	Aug. 8, 1990.
U043	All	Aug. 8, 1990.
U044	All	Aug. 8, 1990.
U045	All	Aug. 8, 1990.
U046	Soil and debris	May 8, 1992.
U046	All others	Aug. 8, 1990.
U047	All	Aug. 8, 1990.
U048	All	Aug. 8, 1990.
U049	Soil and debris	May 8, 1992.
U049	All others	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	Soil and debris	June 8, 1992.
U058	All others	June 8, 1989.
U059	Soil and debris	May 8, 1992.
U059	All others	Aug. 8, 1990.
U060	Soil and debris	May 8, 1992.
U060	All others	Aug. 8, 1990.
U061	Soil and debris	May 8, 1992.
U061	All others	Aug. 8, 1990.
U062	Soil and debris	May 8, 1992.
U062	All others	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	Soil and debris	June 8, 1991.
U069	All others	June 8, 1989.
U070	All	Aug. 8, 1990.
U071	All	Aug. 8, 1990.
U072	All	Aug. 8, 1990.
U073	Soil and debris	May 8, 1992.
U073	All others	Aug. 8, 1990.
U074	Soil and debris	May 8, 1992.
U074	All others	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.
U085	All	Aug. 8, 1990.
U086	All	Aug. 8, 1990.
U087	Soil and debris	June 8, 1991.
U087	All others	June 8, 1989.
U088	Soil and debris	June 8, 1991.
U088	All others	June 8, 1989.
U089	All	Aug. 8, 1990.
U090	All	Aug. 8, 1990.
U091	Soil and Debris	May 8, 1992.
U091	All others	Aug. 8, 1990.
U092	Soil and debris	May 8, 1992.
U092	All others	Aug. 8, 1990.
U093	Soil and debris	May 8, 1992.
U093	All others	Aug. 8, 1990.
U094	All	Aug. 8, 1990.
U095	Soil and debris	May 8, 1992.
U095	All others	Aug. 8, 1990.
U096	All	Aug. 8, 1990.
U097	Soil and debris	May 8, 1992.
U097	All others	Aug. 8, 1990.
U098	All	Aug. 8, 1990.
U099	All	Aug. 8, 1990.
U101	All	Aug. 8, 1990.
U102	Soil and debris	June 8, 1991.
U102	All others	June 8, 1989.
U103	All	Aug. 8, 1990.
U105	All	Aug. 8, 1990.
U106	All	Aug. 8, 1990.
U107	Soil and debris	June 8, 1991.
U107	All others	June 8, 1989.
U108	All	Aug. 8, 1990.
U109	All	Aug. 8, 1990.
U110	Soil and debris	May 8, 1992.
U110	All others	Aug. 8, 1990.
U111	All	Aug. 8, 1990.
U112	All	Aug. 8, 1990.
U113	All	Aug. 8, 1990.
U114	Soil and debris	May 8, 1992.
U114	All others	Aug. 8, 1990.
U115	All	Aug. 8, 1990.
U116	Soil and debris	May 8, 1992.
U116	All others	Aug. 8, 1990.
U117	All	Aug. 8, 1990.
U118	All	Aug. 8, 1990.
U119	Soil and debris	May 8, 1992.
U119	All others	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	Soil and debris	May 8, 1992.
U130	All others	Aug. 8, 1990.
U131	All	Aug. 8, 1990.
U132	Soil and debris	May 8, 1992.
U132	All others	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	Soil and debris	May 8, 1992.
U143	All others	Aug. 8, 1990.
U144	All	Aug. 8, 1990.
U145	All	Aug. 8, 1990.
U146	All	Aug. 8, 1990.
U147	All	Aug. 8, 1990.
U148	Soil and debris	May 8, 1992.
U148	All others	Aug. 8, 1990.
U149	Soil and debris	May 8, 1992.
U149	All others	Aug. 8, 1990.
U150	Soil and debris	May 8, 1992.
U150	All others	Aug. 8, 1990.
U151	High mercury nonwastewater	May 8, 1992.
U151	Low mercury nonwastewater	May 8, 1992.
U151	Soil and debris	May 8, 1992.
U151	All others	Aug. 8, 1990.
U152	All	Aug. 8, 1990.
U153	Soil and debris	May 8, 1992.
U153	All others	Aug. 8, 1990.
U154	All	Aug. 8, 1990.
U155	All	Aug. 8, 1990.
U156	Soil and debris	May 8, 1992.
U156	All others	Aug. 8, 1990.
U157	All	Aug. 8, 1990.
U158	All	Aug. 8, 1990.
U159	All	Aug. 8, 1990.
U160	All	Aug. 8, 1990.
U161	All	Aug. 8, 1990.
U162	All	Aug. 8, 1990.
U163	Soil and debris	May 8, 1992.
U163	All others	Aug. 8, 1990.
U164	Soil and debris	May 8, 1992.
U164	All others	Aug. 8, 1990.
U165	All	Aug. 8, 1990.
U166	All	Aug. 8, 1990.
U167	Soil and debris	May 8, 1992.
U167	All others	Aug. 8, 1990.
U168	Soil and debris	May 8, 1992.
U168	All others	Aug. 8, 1990.
U169	All	Aug. 8, 1990.

U170	All	Aug. 8, 1990.
U171	Soil and debris	May 8, 1992.
U171	All others	Aug. 8, 1990.
U172	All	Aug. 8, 1990.
U173	Soil and debris	May 8, 1992.
U173	All others	Aug. 8, 1990.
U174	All	Aug. 8, 1990.
U176	Soil and debris	May 8, 1992.
U176	All others	Aug. 8, 1990.
U177	Soil and debris	May 8, 1992.
U177	All others	Aug. 8, 1990.
U178	Soil and debris	May 8, 1992.
U178	All others	Aug. 8, 1990.
U179	All	Aug. 8, 1990.
U180	All	Aug. 8, 1990.
U181	All	Aug. 8, 1990.
U182	All	Aug. 8, 1990.
U183	All	Aug. 8, 1990.
U184	Soil and debris	May 8, 1992.
U184	All others	Aug. 8, 1990.
U185	All	Aug. 8, 1990.
U186	All	Aug. 8, 1990.
U187	All	Aug. 8, 1990.
U188	All	Aug. 8, 1990.
U189	All	Aug. 8, 1990.
U190	Soil and debris	June 8, 1991.
U190	All others	June 8, 1989.
U191	Soil and debris	May 8, 1992.
U191	All others	Aug. 8, 1990.
U192	All	Aug. 8, 1990.
U193	Soil and debris	May 8, 1992.
U193	All others	Aug. 8, 1990.
U194	Soil and debris	May 8, 1992.
U194	All others	Aug. 8, 1990.
U196	All	Aug. 8, 1990.
U197	All	Aug. 8, 1990.
U200	Soil and debris	May 8, 1992.
U200	All others	Aug. 8, 1990.
U201	All	Aug. 8, 1990.
U202	Soil and debris	May 8, 1992.
U202	All others	Aug. 8, 1990.
U203	All	Aug. 8, 1990.
U204	All	Aug. 8, 1990.
U205	All	Aug. 8, 1990.
U206	Soil and debris	May 8, 1992.
U206	All others	Aug. 8, 1990.
U207	All	Aug. 8, 1990.
U208	All	Aug. 8, 1990.
U209	All	Aug. 8, 1990.
U210	All	Aug. 8, 1990.
U211	All	Aug. 8, 1990.
U213	All	Aug. 8, 1990.
U214	All	Aug. 8, 1990.
U215	All	Aug. 8, 1990.
U216	All	Aug. 8, 1990.
U217	All	Aug. 8, 1990.
U218	Soil and debris	May 8, 1992.
U218	All others	Aug. 8, 1990.
U219	Soil and debris	May 8, 1992.
U219	All others	Aug. 8, 1990.
U220	All	Aug. 8, 1990.
U221	Soil and debris	June 8, 1991.
U221	All others	June 8, 1989.
U222	Soil and debris	May 8, 1992.
U222	All others	Aug. 8, 1990.

U223	Soil and debris	June 8, 1991.
U223	All others	June 8, 1989.
U225	All	Aug. 8, 1990.
U226	All	Aug. 8, 1990.
U227	All	Aug. 8, 1990.
U228	All	Aug. 8, 1990.
U234	Soil and debris	May 8, 1992.
U234	All others	Aug. 8, 1990.
U235	Soil and debris	June 8, 1991.
U235	All others	June 8, 1989.
U236	Soil and debris	May 8, 1992.
U236	All others	Aug. 8, 1990.
U237	Soil and debris	May 8, 1992.
U237	All others	Aug. 8, 1990.
U238	Soil and debris	May 8, 1992.
U238	All others	Aug. 8, 1990.
U239	All	Aug. 8, 1990.
U240	Soil and debris	May 8, 1992.
U240	All others	Aug. 8, 1990.
U243	All	Aug. 8, 1990.
U244	Soil and debris	May 8, 1992.
U244	All others	Aug. 8, 1990.
U246	All	Aug. 8, 1990.
U247	All	Aug. 8, 1990.
U248	All	Aug. 8, 1990.
U249	All	Aug. 8, 1990.

FOOTNOTE: [a]This table does not include mixed radioactive wastes (from the First, Second, and Third Third rules) which are receiving a national capacity variance until May 8, 1992 for all applicable treatment technologies.

FOOTNOTE: [b]Standards are being promulgated for 1,1,2-trichloroethane and 2-nitropropane for wastewaters and nonwastewaters.

FOOTNOTE: [c]Standards are being promulgated for benzene and 2-ethoxyethanol for wastewaters and nonwastewaters.

FOOTNOTE: [d]Treatment standards for nonwastewaters disposed of after June 8, 1989, were promulgated June 8, 1989.

FOOTNOTE: [e]Treatment standards for nonwastewaters disposed of after August 17, 1988, were promulgated May 2, 1989.

FOOTNOTE: Note: This table is provided for the convenience of the reader.

[55 FR 22715, June 1, 1990]

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	August 8, 1990.

	metals greater than or equal to the prohibition levels	
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 concentrations 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	High Mercury Nonwastewater	May 8, 1992.
D009	Low Mercury 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.
K048	All	August 8, 1990.
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.

FOOTNOTE: [a]Wastes that are deep well disposed on-site receive a six-month variance, with restrictions effective in November 1990.

FOOTNOTE: [b]Deepwell injected D002 liquids with a pH less than 2 must meet the California List treatment standards on August 8, 1990.

FOOTNOTE: Note: This table is provided for the convenience of the reader.

[55 FR 22718, June 1, 1990]

APPENDIX VII

EXAMPLES OF POTENTIALLY INCOMPATIBLE WASTE

APPENDIX VII - 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 (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 consequence as noted.

<u>Group 1-A</u>

Acetylene sludge
Alkaline caustic liquids
Alkaline cleaner
Alkaline corrosive liquids
Alkaline corrosive battery fluid
Caustic wastewater
Lime sludge and other corrosive alkalies
Lime wastwater
Lime and water
Spent caustic

<u>Group 1-B</u>

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: Heat 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, $SOCl_2$, PCl_3, CH_2SiCl_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.

APPENDIX VIII

METHOD 1311 - TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP)

(40 CFR 261, Appendix II)

APPENDIX VIII

Method 1311 Toxicity Characteristic Leaching Procedure (TCLP)

40 CFR Part 261, App. II

1.0 Scope and Application

1.1 The TCLP is designed to determine the mobility of both organic and inorganic analytes present in liquid, solid, and multiphasic wastes.

1.2 If a total analysis of the waste demonstrates that individual analytes are not present in the waste, or that they are present but at such low concentrations that the appropriate regulatory levels could not possibly be exceeded, the TCLP need not be run.

1.3 If an analysis of any one of the liquid fractions of the TCLP extract indicates that a regulated compound is present at such high concentrations that, even after accounting for dilution from the other fractions of the extract, the concentration would be equal to or above the regulatory level for that compound, then the waste is hazardous and it is not necessary to analyze the remaining fractions of the extract.

1.4 If an analysis of extract obtained using a bottle extractor shows that the concentration of any regulated volatile analyte equals or exceeds the regulatory level for that compound, then the waste is hazardous and extraction using the ZHE is not necessary. However, extract from a bottle extractor cannot be used to demonstrate that the concentration of volatile compounds is below the regulatory level.

2.0 Summary of Method

2.1 For liquid wastes (i.e., those containing less than 0.5% dry solid material), the waste, after filtration through a 0.6 to 0.8 μm glass fiber filter, is defined as the TCLP extract.

2.2 For wastes containing greater than or equal to 0.5% solids, the liquid, if any, is separated from the solid phase and stored for later analysis; the particle size of the solid phase is reduced, if necessary. The solid phase is extracted with an amount of extraction fluid equal to 20 times the weight of the solid phase. The extraction fluid employed is a function of the alkalinity of the solid phase of the waste. A special extractor vessel is used when testing for volatile analytes (see Table 1 for a list of volatile compounds). Following extraction, the liquid extract is separated from the solid phase by filtration through a 0.6 to 0.8 μm glass fiber filter.

2.3 If compatible (i.e., multiple phases will not form on combination), the initial liquid phase of the waste is added to the liquid extract, and these are analyzed together. If incompatible, the liquids are analyzed separately and the results are mathematically combined to yield a volume-weighted average concentration.

3.0 Interferences

3.1 Potential interferences that may be encountered during analysis are discussed in the individual analytical methods.

4.0 Apparatus and Materials

4.1 Agitation apparatus: The agitation apparatus must be capable of rotating the extraction vessel in an end-over-end fashion (see Figure 1) at 30 ±2 rpm. Suitable devices known to EPA are identified in Table 2.

4.2 Extraction Vessels.

4.2.1 Zero-Headspace Extraction Vessel (ZHE). This device is for use only when the waste is being tested for the mobility of volatile analytes (i.e., those listed in Table 1). The ZHE (depicted in Figure 2) allows for liquid/solid separation within the device, and effectively precludes headspace. This type of vessel allows for initial liquid/solid separation, extraction, and final extract filtration without opening the vessel (see section 4.3.1). The vessels shall have an internal volume of 500-600 mL, and be equipped to accommodate a 90-110 mm filter. The devices contain VITON(R)[1] O-rings which should be replaced frequently. Suitable ZHE devices known to EPA are identified in Table 3.

(FOOTNOTE) [1]VITON(R) is a registered trademark of DuPont.

For the ZHE to be acceptable for use, the piston within the ZHE should be able to be moved with approximately 15 pounds per square inch (psi) or less. If it takes more pressure to move the piston, the O-rings in the device should be replaced. If this does not solve the problem, the ZHE is unacceptable for TCLP analyses and the manufacturer should be contacted.

The ZHE should be checked for leaks after every extraction. If the device contains a built-in pressure gauge, pressurize the device to 50 psi, allow it to stand unattended for 1 hour, and recheck the pressure. If the device does not have a built-in pressure gauge, pressurize the device to 50 psi, submerge it in water, and check for the presence of air bubbles escaping from any of the fittings. If pressure is lost, check all fittings and inspect and replace O-rings, if necessary. Retest the device. If leakage problems cannot be solved, the manufacturer should be contacted.

Some ZHEs use gas pressure to actuate the ZHE piston, while others use mechanical pressure (see Table 3). Whereas the volatiles procedures (see section 7.3) refers to pounds per square inch (psi), for the mechanically actuated piston, the pressure applied

is measured in torque-inch-pounds. Refer to the manufacturer's instructions as to the proper conversion.

4.2.2 Bottle Extraction Vessel. When the waste is being evaluated using the nonvolatile extraction, a jar with sufficient capacity to hold the sample and the extraction fluid is needed. Headspace is allowed in this vessel.

The extraction bottles may be constructed from various materials, depending on the analytes to be analyzed and the nature of the waste (see section 4.3.3). It is recommended that borosilicate glass bottles be used instead of other types of glass, especially when inorganics are of concern. Plastic bottles, other than polytetrafluoroethylene, shall not be used if organics are to be investigated. Bottles are available from a number of laboratory suppliers. When this type of extraction vessel is used, the filtration device discussed in section 4.3.2 is used for initial liquid/solid separation and final extract filtration.

4.3 Filtration Devices: It is recommended that all filtrations be performed in a hood.

4.3.1 Zero-Headspace Extractor Vessel (ZHE): When the waste is evaluated for volatiles, the zero-headspace extraction vessel described in section 4.2.1 is used for filtration. The device shall be capable of supporting and keeping in place the glass fiber filter and be able to withstand the pressure needed to accomplish separation (50 psi).

Note: When it is suspected that the glass fiber filter has been ruptured, an in-line glass fiber filter may be used to filter the material within the ZHE.

4.3.2 Filter Holder: When the waste is evaluated for other than volatile analytes, any filter holder capable of supporting a glass fiber filter and able to withstand the pressure needed to accomplish separation may be used. Suitable filter holders range from simple vacuum units to relatively complex systems capable of exerting pressures of up to 50 psi or more. The type of filter holder used depends on the properties of the material to be filtered (see section 4.3.3). These devices shall have a minimum internal volume of 300 mL and be equipped to accommodate a minimum filter size of 47 mm (filter holders having an internal capacity of 1.5 L or greater, and equipped to accommodate a 142 mm diameter filter, are recommended). Vacuum filtration can only be used for wastes with low solids content (<10%) and for highly granular, liquid-containing wastes. All other types of wastes should be filtered using positive pressure filtration. Suitable filter holders known to EPA are shown in Table 4.

4.3.3 Materials of Construction: Extraction vessels and filtration devices shall be made of inert materials which will not leach or absorb waste components. Glass, polytetrafluoroethylene (PTFE), or type 316 stainless steel equipment may be used when evaluating the mobility of both organic and inorganic components. Devices made of high density polyethylene (HDPE), polypropylene (PP), or polyvinyl chloride (PVC) may be used only when evaluating the mobility of metals. Borosilicate glass bottles are recommended for use over other types of glass bottles, especially when inorganics are analytes of concern.

4.4 Filters: Filters shall be made of borosilicate glass fiber, shall contain no binder materials, and shall have an effective pore size of 0.6 to 0.8 μm, or equivalent. Filters known to EPA which meet these specifications are identified in Table 5. Pre-filters must not be used. When evaluating the mobility of metals, filters shall be acid-washed prior to use by rinsing with 1N nitric acid followed by three consecutive rinses with deionized distilled water (a minimum of 1 L per rinse is recommended). Glass fiber filter are fragile and should be handled with care.

4.5 pH Meters: The meter should be accurate to ± 0.05 units at 25°C.

4.6 ZHE Extract Collection Devices: TEDLAR(R)[2] bags or glass, stainless steel or PTFE gag-tight syringes are used to collect the initial liquid phase and the final extract of the waste when using the ZHE device. The devices listed are recommended for use under the following conditions:

(FOOTNOTE) [2]TEDLAR(R) is a registered trademark of Dupont.

4.6.1 If a waste contains an aqueous liquid phase or if a waste does not contain a significant amount of nonaqueous liquid (i.e., <1% of total waste), the TEDLAR(R) bag or a 600 mL syringe should be used to collect and combine the initial liquid and solid extract.

4.6.2 If a waste contains a significant amount of nonaqueous liquid in the initial liquid phase (i.e., >1% of total waste), the syringe or the TEDLAR(R) bag may be used for both the intitial solid/liquid separation and the final extract filtration. However, analysts should use one or the other, not both.

4.6.3 If the waste contains no initial liquid phase (is 100% solid) or has no significant solid phase (is 100% liquid), either the TEDLAR(R) bag or the syringe may be used. If the syringe is used, discard the first 5 mL of liquid expressed from the device. The remaining aliquots are used for analysis.

4.7 ZHE Extraction Fluid Transfer Devices: Any device capable of transferring the extraction fluid into the ZHE without changing the nature of the extraction fluid is acceptable (e.g, a positive displacement or peristaltic pump, a gas tight syringe, pressure filtration unit (see section 4.3.2), or other ZHE device).

4.8 Laboratory Balance: Any laboratory balance accurate to within ± 0.01 grams may be used (all weight measurements are to be within ± 0.1 grams).

4.9 Beaker or Erlenmeyer flask, glass, 500 mL.

4.10 Watchglass, appropriate diameter to cover beaker or erlenmeyer flask.

4.11 Magnetic stirrer.

5.0 Reagents

5.1 Reagent grade chemicals shall be used in all tests. Unless otherwise indicated, it is intended that all reagents shall conform to the specifications of the Committee on Analytical Reagents of the American Chemical Society, where such specifications are available. Other grades may be used, provided it is first ascertained that the reagent is of sufficiently high purity to permit its use without lessening the accuracy of the determination.

5.2 Reagent water. Reagent water is defined as water in which an interferant is not observed at or above the methods detection limit of the analyte(s) of interest. For nonvolatile extractions, ASTM Type II water or equivalent meets the definition of reagent water. For volatile extractions, it is recommended that reagent water be generated by any of the following methods. Reagent water should be monitored periodically for impurities.

5.2.1 Reagent water for volatile extractions may be generated by passing tap water through a carbon filter bed containing about 500 grams of activated carbon (Calgon Corp., Filtrasorb-300 or equivalent).

5.2.2 A water purification system (Millipore Super-Q or equivalent) may also be used to generate reagent water for volatile extractions.

5.2.3 Reagent water for volatile extractions may also be prepared by boiling water for 15 minutes. Subsequently, while maintaining the water temperature at 90 + 5 degrees C, bubble a contaminant-free inert gas (e.g., nitrogen) through the water for 1 hour. While still hot, transfer the water to a narrow mouth screw-cap bottle under zero-headspace and seal with a Teflon-lined septum and cap.

5.3 Hydrochloric acid (1N), HCl, made from ACS reagent grade.

5.4 Nitric acid (1N), HNO_3, made from ACS reagent grade.

5.5 Sodium hydroxide (1N), NaOH, made from ACS reagent grade.

5.6 Glacial acetic acid, CH_3CH_2OOH, ACS reagent grade.

5.7 Extraction fluid.

5.7.1 Extraction fluid #1: Add 5.7 mL glacial CH_3CH_2OOH to 500 mL of reagent water (See section 5.2), add 64.3 mL of 1N NaOH, and dilute to a volume of 1 liter. When correctly prepared, the pH of this fluid will be 4.93±0.05.

5.7.2 Extraction fluid #2: Dilute 5.7 mL glacial CH_3CH_2OOH with reagent water (See section 5.2) to a volume of 1 liter. When correctly prepared, the pH of this fluid will be 2.88±0.05.

Note: These extraction fluids should be monitored frequently for impurities. The pH should be checked prior to use to ensure that these fluids are made up accurately. If impurities are found or the pH is not within the above specifications, the fluid shall be discarded and fresh extraction fluid prepared.

5.8 Analytical standards shall be prepared according to the appropriate analytical method.

6.0 Sample Collection, Preservation, and Handling

6.1 All samples shall be collected using an appropriate sampling plan.

6.2 The TCLP may place requirements on the minimal size of the field sample, depending upon the physical state or states of the waste and the analytes of concern. An aliquot is needed for preliminary evaluation of which extraction fluid is to be used for the nonvolatile analyte extraction procedure. Another aliquot may be needed to actually conduct the nonvolatile extraction (see section 1.4 concerning the use of this extract for volatile organics). If volatile organics are of concern, another aliquot may be needed. Quality control measures may require additional aliquots. Further, it is always wise to collect more samples just in case something goes wrong with the initial attempt to conduct the test.

6.3 Preservatives shall not be added to samples before extraction.

6.4 Samples may be refrigerated unless refrigeration results in irreversible physical change to the waste. If precipitation occurs, the entire sample (including precipitate) should be extracted.

6.5 When the waste is to be evaluated for volatile analytes, care shall be taken to minimize the loss of volatiles. Samples shall be collected and stored in a manner intended to prevent the loss of volatile analytes (e.g., samples should be collected in Teflon-lined septum capped vials and stored at 4 °C. Samples should be opened only immediately prior to extraction).

6.6 TCLP extracts should be prepared for analysis and analyzed as soon as possible following extraction. Extracts or portions of extracts for metallic analyte determinations must be acidified with nitric acid to a pH <2, unless precipitation occurs (see section 7.2.14 if precipitation occurs). Extracts should be preserved for other analytes according to the guidance given in the individual analysis methods. Extracts or portions of extracts for organic analyte determinations shall not be allowed to come into contact with the

atmosphere (i.e., no headspace) to prevent losses. See section 8.0 (QA requirements) for acceptable sample and extract holding times.

7.0 Procedure

7.1 Preliminary Evaluations. Perform preliminary TCLP evaluations on a minimum 100 gram aliquot of waste. This aliquot may not actually undergo TCLP extraction. These preliminary evaluations include: (1) Determination of the percent solids (section 7.1.1); (2) determination of whether the waste contains insignificant solids and is, therefore, its own extract after filtration (section 7.1.2); (3) determination of whether the solid portion of the waste requires particle size reduction (section 7.1.3); and (4) determination of which of the two extraction fluids are to be used for the nonvolatile TCLP extraction of the waste (section 7.1.4.).

7.1.1 Preliminary determination of percent solids: Percent solids is defined as that fraction of a waste sample (as a percentage of the total sample) from which no liquid may be forced out by an applied pressure, as described below.

7.1.1.1 If the waste will obviously yield no liquid when subjected to pressure filtration (i.e., is 100% solids) proceed to section 7.1.3.

7.1.1.2 If the sample is liquid or multiphasic, liquid/solid separation to make a preliminary determination of percent solids is required. This involves the filtration device described in section 4.3.2 and is outlined in sections 7.1.1.3 through 7.1.1.9.

7.1.1.3 Pre-weigh the filter and the container that will receive the filtrate.

7.1.1.4 Assemble the filter holder and filter following the manufacturer's instructions. Place the filter on the support screen and secure.

7.1.1.5 Weigh out a subsample of the waste (100 gram minimum) and record the weight.

7.1.1.6 Allow slurries to stand to permit the solid phase to settle. Wastes that settle slowly may be centrifuged prior to filtration. Centrifugation is to be used only as an aid to filtration. If used, the liquid should be decanted and filtered followed by filtration of the solid portion of the waste through the same filtration system.

7.1.1.7 Quantitatively transfer the waste sample to the filter holder (liquid and solid phases). Spread the waste sample evenly over the surface of the filter. If filtration of the waste at 4 °C reduces the amount of expressed liquid over what would be expressed at room temperature then allow the sample to warm up to room temperature in the device before filtering.

Note: If waste material (1% of original sample weight) has obviously adhered to the container used to transfer the sample to the filtration apparatus, determine the weight of this residue and subtract it from the sample weight determined in section 7.1.1.5 to determine the weight of the waste sample that will be filtered.

Gradually apply vacuum or gentle pressure of 1-10 psi, until air or pressurizing gas moves through the filter. If this point is not reached under 10 psi, and if no additional liquid has passed through the filter in any 2 minute interval, slowly increase the pressure in 10 psi increments to a maximum of 50 psi. After each incremental increase of 10 psi, if the pressurizing gas has not moved through the filter, and if no additional liquid has passed through the filter in any 2 minute interval, proceed to the next 10 psi increment. When the pressurizing gas begins to move through the filter, or when liquid flow has ceased at 50 psi (i.e., filtration does not result in any additional filtrate within any 2 minute period), stop the filtration.

Note: Instantaneous application of high pressure can degrade the glass fiber filter and may cause premature plugging.

7.1.1.8 The material in the filter holder is defined as the solid phase of the waste, and the filtrate is defined as the liquid phase.

Note: Some wastes, such as oily wastes and some paint wastes, will obviously contain some material that appears to be a liquid. Even after applying vacuum or pressure filtration, as outlined in section 7.1.1.7, this material may not filter. If this is the case, the material within the filtration device is defined as a solid. Do not replace the original filter with a fresh filter under any circumstances. Use only one filter.

7.1.1.9 Determine the weight of the liquid phase by subtracting the weight of the filtrate container (see section 7.1.1.3) from the total weight of the filtrate-filled container. Determine the weight of the solid phase of the waste sample by subtracting the weight of the liquid phase from the weight of the total waste sample, as determined in section 7.1.1.5 or 7.1.1.7.

Record the weight of the liquid and solid phases. Calculate the percent solids as follows:

$$\text{Percent solids} = \frac{\text{Weight of solid (section 7.1.1.9)}}{\text{Total weight of waste (section 7.1.1.5 or 7.1.1.7)}} \times 100$$

7.1.2 If the percent solids determined in section 7.1.1.9 is equal to or greater than 0.5%, then proceed either to section 7.1.3 to determine whether the solid material requires particle size reduction or to section 7.1.2.1 if it is noticed that a small amount of the filtrate is entrained in wetting of the filter. If the percent solids determined in section 7.1.1.9 is less than 0.5%, then proceed to section 7.2.9 if the nonvolatile TCLP is to be performed and to section 7.3 with a fresh portion of the waste if the volatile TCLP is to be performed.

7.1.2.1 Remove the solid phase and filter from the filtration apparatus.

7.1.2.2 Dry the filter and solid phase at 100± 20°C until two successive weighings yield the same value within ± 1%. Record the final weight.

Note: Caution should be taken to ensure that the subject solid will not flash upon heating. It is recommended that the drying oven be vented to a hood or other appropriate device.

7.1.2.3 Calculate the percent dry solids as follows:

$$\% \text{ dry solids} = \frac{\text{(Weight of dry waste + filter) - tared weight of filter}}{\text{Initial weight of waste (section 7.1.1.5 or 7.1.1.7)}} \times 100$$

7.1.2.4 If the percent dry solids is less than 0.5%, then proceed to section 7.2.9 if the nonvolatile TCLP is to be performed, and to section 7.3 if the volatile TCLP is to be performed. If the percent dry solids is greater than or equal to 0.5%, and if the nonvolatile TCLP is to be performed, return to the beginning of this section (7.1) and, with a fresh portion of waste, determine whether particle size reduction is necessary (section 7.1.3) and determine the appropriate extraction fluid (section 7.1.4). If only the volatile TCLP is to be performed, see the note in section 7.1.4.

7.1.3 Determination of whether the waste requires particle size reduction (particle size is reduced during this step): Using the solid portion of the waste, evaluate the solid for particle size. Particle size reduction is required, unless the solid has a surface area per gram of material equal to or greater than 3.1 cm^2, or is smaller than 1 cm in its narrowest dimension (i.e., is capable of passing through a 9.5 mm (0.375 inch) standard sieve). If the surface area is smaller or the particle size larger than described above, prepare the solid portion of the waste for extraction by crushing, cutting, or grinding the waste to a surface area or particle size as described above. If the solids are prepared for organic volatiles extraction, special precautions must be taken (see section 7.3.6).

Note: Surface area criteria are meant for filamentous (e.g., paper, cloth, and similar) waste materials. Actual measurement of surface area is not required, nor is it recommended. For materials that do not obviously meet the criteria, sample-specific methods would need to be developed and employed to measure the surface area. Such methodology is currently not available.

7.1.4 Determination of appropriate extraction fluid: If the solid content of the waste is greater than or equal to 0.5% and if the sample will be extracted for nonvolatile constituents (section 7.2), determine the appropriate fluid (section 5.7) for the nonvolatiles extraction as follows:

Note: TCLP extraction for volatile constituents uses only extraction fluid #1 (section 5.7.1). Therefore, if TCLP extraction for nonvolatiles is not required, proceed to section 7.3.

7.1.4.1 Weigh out a small subsample of the solid phase of the waste, reduce the solid (if necessary) to a particle size of approximately 1 mm in diameter or less, and transfer 5.0 grams of the solid phase of the waste to a 500 mL beaker or Erlenmeyer flask.

7.1.4.2 Add 96.5 mL of reagent water to the beaker, cover with a watchglass, and stir vigorously for 5 minutes using a magnetic stirrer. Measure and record the pH. If the pH is <5.0, use extraction fluid #1. Proceed to section 7.2.

7.1.4.3 If the pH from section 7.1.4.2 is >5.0, add 3.5 mL 1N NCl, slurry briefly, cover with a watchglass, heat to 50°C, and hold at 50°C for 10 minutes.

7.1.4.4 Let the solution cool to room temperature and record the pH. If the pH is <5.0, use extraction fluid #1. If the pH is >5.0, use extraction fluid #2. Proceed to section 7.2.

7.1.5 If the aliquot of the waste used for the preliminary evaluation (sections 7.1.1-7.1.4) was determined to be 100% solid at section 7.1.1.1, then it can be used for the section 7.2 extraction (assuming at least 100 grams remain), and the section 7.3 extraction (assuming at least 25 grams remain). If the aliquot was subjected to the procedure in section 7.1.1.7, then another aliquot shall be used for the volatile extraction procedure in section 7.3. The aliquot of the waste subjected to the procedure in section 7.1.1.7 might be appropriate for use for the section 7.2 extraction if an adequate amount of solid (as determined by section 7.1.1.9) was obtained. The amount of solid necessary is dependent upon whether a sufficient amount of extract will be produced to support the analyses. If an adequate amount of solid remains, proceed to section 7.2.10 of the nonvolatile TCLP extraction.

7.2 Procedure When Volatiles are not Involved. A minimum sample size of 100 grams (solid and liquid phases) is recommended. In some cases, a larger sample size may be appropriate, depending on the solids content of the waste sample (percent solids, See section 7.1.1), whether the initial liquid phase of the waste will be miscible with the aqueous extract of the solid, and whether inorganics, semivolatile organics, pesticides, and herbicides are all analytes of concern. Enough solids should be generated for extraction such that the volume of TCLP extract will be sufficient to support all of the analyses required. If the amount of extract generated by a single TCLP extraction will not be sufficient to perform all of the analyses, more than one extraction may be performed and the extracts from each combined and aliquoted for analysis.

7.2.1 If the waste will obviously yield no liquid when subjected to pressure filtration (i.e., is 100% solid, see section 7.1.1), weigh out a subsample of the waste (100 gram minimum) and proceed to section 7.2.9.

7.2.2 If the sample is liquid or multiphasic, liquid/solid separation is required. This involves the filtration device described in section 4.3.2 and is outlined in sections 7.2.3 to 7.2.8.

7.2.3 Pre-weigh the container that will receive the filtrate.

7.2.4 Assemble the filter holder and filter following the manufacturer's instructions. Place the filter on the support screen and secure. Acid-wash the filter if evaluating the mobility of metals (see section 4.4).

Note: Acid-washed filters may be used for all nonvolatile extractions even when metals are not of concern.

7.2.5 Weigh out a subsample of the waste (100 gram minimum) and record the weight. If the waste contains <0.5% dry solids (section 7.1.2), the liquid portion of the waste, after filtration, is defined as the TCLP extract. Therefore, enough of the sample should be filtered so that the amount of filtered liquid will support all of the analyses required of the TCLP extract. For wastes containing >0.5% dry solids (sections 7.1.1 or 7.1.2), use the percent solids information obtained in section 7.1.1 to determine the optimum sample size (100 gram minimum) for filtration. Enough solids should be generated by filtration to support the analyses to be performed on the TCLP extract.

7.2.6 Allow slurries to stand to permit the solid phase to settle. Wastes that settle slowly may be centrifuged prior to filtration. Use centrifugation only as an aid to filtration. If the waste is centrifuged, the liquid should be decanted and filtered followed by filtration of the solid portion of the waste through the same filtration system.

7.2.7 Quantitatively transfer the waste sample (liquid and solid phases) to the filter holder (see section 4.3.2). Spread the waste sample evenly over the surface of the filter. If filtration of the waste at 4 °C reduces the amount of expressed liquid over what would be expressed at room temperature, then allow the sample to warm up to room temperature in the device before filtering.

Note: If waste material (>1% of the original sample weight) has obviously adhered to the container used to transfer the sample to the filtration apparatus, determine the weight of this residue and subtract it from the sample weight determined in section 7.2.5, to determine the weight of the waste sample that will be filtered.

Gradually apply vacuum or gentle pressure of 1-10 psi, until air or pressurizing gas moves through the filter. If this point is reached under 10 psi, and if no additional liquid has passed through the filter in any 2 minute interval, slowly increase the pressure in 10 psi increments to a maximum of 50 psi. After each incremental increase of 10 psi, if the pressurizing gas has not moved through the filter, and if no additional liquid has passed through the filter in any 2 minute interval, proceed to the next 10 psi increment. When the pressurizing gas begins to move through the filter, or when the liquid flow has ceased at 50 psi (i.e., filtration does not result in any additional filtrate within a 2 minute period), stop the filtration.

Note: Instantaneous application of high pressure can degrade the glass fiber filter and may cause premature plugging.

7.2.8 The material in the filter holder is defined as the solid phase of the waste, and the filtrate is defined as the liquid phase. Weigh the filtrate. The liquid phase may now be either analyzed (See section 7.2.12) or stored at 4°C until time of analysis.

Note: Some wastes, such as oily wastes and some paint wastes, will obviously contain some material that appears to be a liquid. Even after applying vacuum or pressure filtration, as outlined in section 7.2.7, this material may not filter. If this is the case, the material within the filtration device is defined as a solid and is carried through the extraction as a solid. Do not replace the original filter with a fresh filter under any circumstances. Use only one filter.

7.2.9 If the waste contains <0.5% dry solids (see section 7.1.2), proceed to section 7.2.13. If the waste contains >0.5% dry solids (see section 7.1.1 or 7.1.2), and if particle size reduction of the solid was needed in section 7.1.3, proceed to section 7.2.10. If the waste as received passes a 9.5 mm sieve, quantitatively transfer the solid material into the extractor bottle along with the filter used to separate the initial liquid from the solid phase, and proceed to section 7.2.11.

7.2.10 Prepare the solid portion of the waste for extraction by crushing, cutting, or grinding the waste to a surface area or particle size as described in section 7.1.3. When the surface area or particle size has been appropriately altered, quantitatively transfer the solid material into an extractor bottle. Include the filter used to separate the initial liquid from the solid phase.

Note: Sieving of the waste is not normally required. Surface area requirements are meant for filamentous (e.g., paper, cloth) and similar waste materials. Actual measurement of surface area is not recommended. If sieving is necessary, a Teflon-coated sieve should be used to avoid contamination of the sample.

7.2.11 Determine the amount of extraction fluid to add to the extractor vessel as follows:

$$\text{Weight of extraction fluid} = \frac{20 \times \text{percent solids (section 7.1.1)}}{\text{X weight of waste filtered (section 7.2.5 or 7.2.7)}} \quad 100$$

Slowly add this amount of appropriate extraction fluid (see section 7.1.4) to the extractor vessel. Close the extractor bottle tightly (it is recommended that Teflon tape be used to ensure a tight seal), secure in rotary agitation device, and rotate at 30 ± 2 rpm for 18 ± 2 hours. Ambient temperature (i.e., temperature of room in which extraction takes place) shall be maintained at 23 ± 2°C during the extraction period.

Note: As agitation continues, pressure may build within the extractor bottle for some types of wastes (e.g., limed or calcium carbonate containing waste may evolve gases such as carbon dioxide). To relieve excess pressure, the extractor bottle may be periodically opened (e.g., after 15 minutes, 30 minutes, and 1 hour) and vented into a hood.

7.2.12 Following the 18 ± 2 hour extraction, separate the material in the extractor vessel into its component liquid and solid phases by filtering through a new glass fiber filter, as outlined in section 7.2.7. For final filtration of the TCLP extract, the glass fiber filter may be changed, if necessary, to facilitate filtration. Filter(s) shall be acid-washed (see section 4.4) if evaluating the mobility of metals.

7.2.13 Prepare the TCLP extract as follows:

7.2.13.1 If the waste contained no initial liquid phase, the filtered liquid material obtained from section 7.2.12 is defined as the TCLP extract. Proceed to section 7.2.14.

7.2.13.2 If compatible (e.g., multiple phases will not result on combination), combine the filtered liquid resulting from section 7.2.12 with the initial liquid phase of the waste obtained in section 7.2.7. This combined liquid is defined as the TCLP extract. Proceed to section 7.2.14.

7.2.13.3 If the initial liquid phase of the waste, as obtained from section 7.2.7, is not or may not be compatible with the filtered liquid resulting from section 7.2.12, do not combine these liquids. Analyze these liquids, collectively defined as the TCLP extract, and combine the results mathematically, as described in section 7.2.14.

7.2.14 Following collection of the TCLP extract, the pH of the extract should be recorded. Immediately aliquot and preserve the extract for analysis. Metals aliquots must be acidified with nitric acid to pH <2. If precipitation is observed upon addition of nitric acid to a small aliquot of the extract, then the remaining portion of the extract for metals analyses shall not be acidified and the extract shall be analyzed as soon as possible. All other aliquots must be stored under refrigeration (4 °C) until analyzed. The TCLP extract shall be prepared and analyzed according to appropriate analytical methods. TCLP extracts to be analyzed for metals shall be acid digested except in those instances where digestion causes loss of metallic analytes. If an analysis of the undigested extract shows that the concentration of any regulated metallic analyte exceeds the regulatory level, then the waste is hazardous and digestion of the extract is not necessary. However, data on undigested extracts alone cannot be used to demonstrate that the waste is not hazardous. If the individual phases are to be analyzed separately, determine the volume of the individual phases (to ± 0.5%), conduct the appropriate analyses, and combine the results mathematically by using a simple volume-weighted average:

$$\text{Final Analyte Concentration} = \frac{(V_1)(C_1)+(V_2)(C_2)}{V_1+V_2}$$

where:

V_1=The volume of the first phase (L).

C_1=The concentration of the analyte of concern in the first phase (mg/L).

V_2=The volume of the second phase (L).

C_2=The concentration of the analyte of concern in the second phase (mg/L).

7.2.15 Compare the analyte concentrations in the TCLP extract with the levels identified in the appropriate regulations. Refer to section 8.0 for quality assurance requirements.

7.3 Procedure When Volatiles are Involved. Use the ZHE device to obtain TCLP extract for analysis of volatile compounds only. Extract resulting from the use of the ZHE shall not be used to evaluate the mobility of nonvolatile analytes (e.g., metals, pesticides, etc.).

The ZHE device has approximately a 500 mL internal capacity. The ZHE can thus accommodate a maximum of 25 grams of solid (defined as that fraction of a sample from which no additional liquid may be forced out by an applied pressure of 50 psi), due to the need to add an amount of extraction fluid equal to 20 times the weight of the solid phase.

Charge the ZHE with sample only once and do not open the device until the final extract (of the solid) has been collected. Repeated filling of the ZHE to obtain 25 grams of solid is not permitted.

Do not allow the waste, the initial liquid phase, or the extract to be exposed to the atmosphere for any more time than is absolutely necessary. Any manipulation of these materials should be done when cold (4°C) to minimize loss of volatiles.

7.3.1 Pre-weigh the (evacuated) filtrate collection container (See section 4.6) and set aside. If using a TEDLAR(R) bag, express all liquid from the ZHE device into the bag, whether for the initial or final liquid/solid separation, and take an aliquot from the liquid in the bag for analysis. The containers listed in section 4.6 are recommended for use under the conditions stated in sections 4.6.1-4.6.3.

7.3.2 Place the ZHE piston within the body of the ZHE (it may be helpful first to moisten the piston O-rings slightly with extraction fluid). Adjust the piston within the ZHE body to a height that will minimize the distance the piston will have to move once the ZHE is charged with sample (based upon sample size requirements determined from section 7.3, section 7.1.1 and/or 7.1.2). Secure the gas inlet/outlet flange (bottom flange) onto the ZHE body in accordance with the manufacturer's instructions. Secure the glass fiber filter between the support screens and set aside. Set liquid inlet/outlet flange (top flange) aside.

7.3.3 If the waste is 100% solid (see section 7.1.1), weigh out a subsample (25 gram maximum) of the waste, record weight, and proceed to section 7.3.5.

7.3.4 If the waste contains <5% dry solids (section 7.1.2), the liquid portion of waste, after filtration, is defined as the TCLP extract. Filter enough of the sample so that the amount of filtered liquid will support all of the volatile analyses required. For wastes containing >5% dry solids (sections 7.1.1 and/or 7.1.2), use the percent solids information obtained in section 7.1.1 to determine the optimum sample size to charge into the ZHE. The recommended sample size is as follows:

7.3.4.1 For wastes containing <5% solids (see Section 7.1.1), weigh out a 500 gram subsample of waste and record the weight.

7.3.4.2 For wastes containing >5% solids (see Section 7.1.1), determine the amount of waste to charge into the ZHE as follows:

$$\text{Weight of waste to charge ZHE} = \frac{25}{\text{percent solids (section 7.1.1)}} \times 100$$

Weigh out a subsample of the waste of the appropriate size and record the weight.

7.3.5 If particle size reduction of the solid portion of the waste was required in section 7.1.3, proceed to section 7.3.6. If particle size reduction was not required in section 7.1.3, proceed to section 7.3.7.

7.3.6 Prepare the waste for extraction by crushing, cutting, or grinding the solid portion of the waste to a surface area or particle size as described in section 7.1.3.1. Wastes and appropriate reduction equipment should be refrigerated, if possible, to 4°C prior to particle size reduction. The means used to effect particle size reduction must not generate heat in and of itself. If reduction of the solid phase of the waste is necessary, exposure of the waste to the atmosphere should be avoided to the extent possible.

Note: Sieving of the waste is not recommended due to the possibility that volatiles may be lost. The use of an appropriately graduated ruler is recommended as an acceptable alternative. Surface area requirements are meant for filamentous (e.g., paper, cloth) and similar waste materials. Actual measurement of surface area is not recommended.

When the surface area or particle size has been appropriately altered, proceed to section 7.3.7.

7.3.7 Waste slurries need not be allowed to stand to permit the solid phase to settle. Do not centrifuge wastes prior to filtration.

7.3.8 Quantitatively transfer the entire sample (liquid and solid phases) quickly to the ZHE. Secure the filter and support screens onto the top flange of the device and secure the top flange to the ZHE body in accordance with the manufacturer's instructions. Tighten all ZHE fittings and place the device in the vertical position (gas inlet/outlet flange on the bottom). Do not attach the extract collection device to the top plate.

Note: If waste material (>1% of original sample weight) has obviously adhered to the container used to transfer the sample to the ZHE, determine the weight of this residue and subtract it from the sample weight determined in section 7.3.4 to determine the weight of the waste sample that will be filtered.

Attach a gas line to the gas inlet/outlet valve (bottom flange) and, with the liquid inlet/outlet valve (top flange) open, begin applying gentle pressure of 1-10 psi (or more if necessary) to force all headspace slowly out of the ZHE device into a hood. At the first appearance of liquid from the liquid inlet/outlet valve, quickly close the valve and discontinue pressure. If filtration of the waste at 4 °C reduces the amount of expressed liquid over what would be expressed at room temperature, then allow the sample to warm up to room temperature in the device before filtering. If the waste is 100% solid (see section 7.1.1), slowly increase the pressure to a maximum of 50 psi to force most of the headspace out of the device and proceed to section 7.3.12.

7.3.9 Attach the evacuated pre-weighed filtrate collection container to the liquid inlet/outlet valve and open the valve. Begin applying gentle pressure of 1-10 psi to force the liquid phase of the sample into the filtrate collection container. If no additional liquid has passed through the filter in any 2 minute interval, slowly increase the pressure in 10 psi increments to a maximum of 50 psi. After each incremental increase of 10 psi, if no additional liquid has passed through the filter in any 2 minute interval, proceed to the next 10 psi increment. When liquid flow has ceased such that continued pressure filtration at 50 psi does not result in any additional filtrate within a 2 minute period, stop the filtration. Close the liquid inlet/outlet valve, discontinue pressure to the piston, and disconnect and weigh the filtrate collection container.

Note: Instantaneous application of high pressure can degrade the glass fiber filter and may cause premature plugging.

7.3.10 The material in the ZHE is defined as the solid phase of the waste and the filtrate is defined as the liquid phase.

Note: Some wastes, such as oily wastes and some paint wastes, will obviously contain some material that appears to be a liquid. Even after applying pressure filtration, this material will not filter. If this is the case, the material within the filtration device is defined as a solid and is carried through the TCLP extraction as a solid.

If the original waste contained <0.5% dry solids (see section 7.1.2), this filtrate is defined as the TCLP extract and is analyzed directly. Proceed to section 7.3.15.

7.3.11 The liquid phase may now be either analyzed immediately (See sections 7.3.13 through 7.3.15) or stored at 4°C under minimal headspace conditions until time of analysis.

Determine the weight of extraction fluid #1 to add to the ZHE as follows:

$$\text{Weight of extraction fluid} = \frac{20 \times \text{percent solids (section 7.1.1)} \times \text{weight of waste filtered (section 7.3.4 or 7.3.8)}}{100}$$

7.3.12 The following sections detail how to add the appropriate amount of extraction fluid to the solid material within the ZHE and agitation of the ZHE vessel. Extraction fluid #1 is used in all cases (See section 5.7).

7.3.12.1 With the ZHE in the vertical position, attach a line from the extraction fluid reservoir to the liquid inlet/outlet valve. The line used shall contain fresh extraction fluid and should be preflushed with fluid to eliminate any air pockets in the line. Release gas pressure on the ZHE piston (from the gas inlet/outlet valve), open the liquid inlet/outlet valve, and begin transferring extraction fluid (by pumping or similar means) into the ZHE. Continue pumping extraction fluid into the ZHE until the appropriate amount of fluid has been introduced into the device.

7.3.12.2 After the extraction fluid has been added, immediately close the liquid inlet/outlet valve and disconnect the extraction fluid line. Check the ZHE to ensure that all valves are in their closed positions. Manually rotate the device in an end-over-end fashion 2 or 3 times. Reposition the ZHE in the vertical position with the liquid inlet/outlet valve on top. Pressurize the ZHE to 5-10 psi (if necessary) and slowly open the liquid inlet/outlet valve to bleed out any headspace (into a hood) that may have been introduced due to the addition of extraction fluid. This bleeding shall be done quickly and shall be stopped at the first appearance of liquid from the valve. Re-pressurize the ZHE with 5-10 psi and check all ZHE fittings to ensure that they are closed.

7.3.12.3 Place the ZHE in the rotary agitation apparatus (if it is not already there) and rotate at 30 ± 2 rpm for 18 ± 2 hours. Ambient temperature (i.e., temperature of room in which extraction occurs) shall be maintained at 22 ± 3°C during agitation.

7.3.13 Following the 18 ± 2 hour agitation period, check the pressure behind the ZHE piston by quickly opening and closing the gas inlet/outlet valve and noting the escape of gas. If the pressure has not been maintained (i.e., no gas release observed), the device is leaking. Check the ZHE for leaking as specified in section 4.2.1, and perform the extraction again with a new sample of waste. If the pressure within the device has been maintained, the material in the extractor vessel is once again separated into its component liquid and solid phases. If the waste contained an initial liquid phase, the liquid may be filtered directly into the same filtrate collection container (i.e., TEDLAR(R) bag) holding the initial liquid phase of the waste. A separate filtrate collection container must be used if combining would create multiple phases, or there is not enough volume left within the filtrate collection container. Filter through the glass fiber filter, using the ZHE device as discussed in section 7.3.9. All extract shall be filtered and collected if the TEDLAR(R) bag is used, if the extract is multiphasic, or if the waste contained an initial liquid phase (see sections 4.6 and 7.3.1).

Note: An in-line glass fiber filter may be used to filter the material within the ZHE if it is suspected that the glass fiber filter has been ruptured.

7.3.14 If the original waste contained no initial liquid phase, the filtered liquid material obtained from section 7.3.13 is defined as the TCLP extract. If the waste contained an initial liquid phase, the filtered liquid material obtained from section 7.3.13 and the initial liquid phase (section 7.3.9) are collectively defined as the TCLP extract.

7.3.15 Following collection of the TCLP extract, immediately prepare the extract for analysis and store with minimal headspace at 4°C until analyzed. Analyze the TCLP extract according to the appropriate analytical methods. If the individual phases are to be analyzed separately (i.e., are not miscible), determine the volume of the individual phases (to 0.5%), conduct the appropriate analyses, and combine the results mathematically by using a simple volume-weighted average:

$$\text{Final Analyte Concentration} = \frac{(V_1)(C_1)+(V_2)(C_2)}{V_1+V_2}$$

where:

V_1 = The volume of the first phases (L).

C_1=The concentration of the analyte of concern in the first phase (mg/L).

V_2=The volume of the second phase (L).

C_2=The concentration of the analyte of concern in the second phase (mg/L).

7.3.16 Compare the analyte concentrations in the TCLP extract with the levels identified in the appropriate regulations. Refer to section 8.0 for quality assurance requirements.

8.0 Quality Assurance

8.1 A minimum of one blank (using the same extraction fluid as used for the samples) must be analyzed for every 20 extractions that have been conducted in an extraction vessel.

8.2 A matrix spike shall be performed for each waste type (e.g., wastewater treatment sludge, contaminated soil, etc.) unless the result exceeds the regulatory level and the data is being used solely to demonstrate that the waste property exceeds the regulatory level. A minimum of one matrix spike must be analyzed for each analytical batch. The bias determined from the matrix spike determination shall be used to correct the measured values. (See sections 8.2.4 and 8.2.5.) As a minimum, follow the matrix spike addition guidance provided in each analytical method.

8.2.1 Matrix spikes are to be added after filtration of the TCLP extract and before preservation. Matrix spikes should not be added prior to TCLP extraction of the sample.

8.2.2 In most cases, matrix spikes should be added at a concentration equivalent to the corresponding regulatory level. If the analyte concentration is less than one half the regulatory level, the spike concentration may be as low as one half of the analyte concentration, but may not be not less than five times the method detection limit. In order to avoid differences in matrix effects, the matrix spikes must be added to the same nominal volume of TCLP extract as that which was analyzed for the unspiked sample.

8.2.3 The purpose of the matrix spike is to monitor the performance of the analytical methods used, and to determine whether matrix interferences exist. Use of other internal calibration methods, modification of the analytical methods, or use of alternate analytical methods may be needed to accurately measure the analyte concentration of the TCLP extract when the recovery of the matrix spike is below the expected analytical method performance.

8.2.4 Matrix spike recoveries are calculated by the following formula:

$\%R$ (% Recovery) = $100\ (X_s - X_u)/K$

where:

X_s=measured value for the spiked sample,

X_u=measured value for the unspiked sample, and

K= known value of the spike in the sample.

8.2.5 Measured values are corrected for analytical bias using the following formula:

$X_c = 100\ (X_u/\%R)$

where:

X_c=corrected value, and

X_u=measured value of the unspiked sample.

8.3 All quality control measures described in the appropriate analytical methods shall be followed.

8.4 Samples must undergo TCLP extraction within the following time periods:

Sample Maximum Holding Times (Days)

From: Field collection to: TCLP extraction	From: TCLP extraction to: Preparative extraction	From: preparative extraction to: determinative analysis	Total elapsed time

Volatiles	14	NA	14	28
Semivolatiles	14	7	40	61
Mercury	28	NA	28	56
Metals, except mercury	180	NA	180	360

FOOTNOTE: NA = Not applicable.

If sample holding times are exceeded, the values obtained will be considered minimal concentrations. Exceeding the holding time is not acceptable in establishing that a waste does not exceed the regulatory level. Exceeding the holding time will not invalidate characterization if the waste exceeds the regulatory level.

Table 1. – Volatile Analytes[1,2]

Compound	CAS No.
Acetone	67-64-1
Benzene	71-43-2
n-Butyl alcohol	71-36-3
Carbon disulfide	75-15-0
Carbon tetrachloride	56-23-5
Chlorobenzene	108-90-7
Chloroform	67-66-3
1,2-Dichloroethane	107-06-2
1,1-Dichloroethylene	75-35-4
Ethyl acetate	141-78-6
Ethyl benzene	100-41-4
Ethyl ether	60-29-7
Isobutanol	78-83-1
Methanol	67-56-1
Methylene chloride	75-09-2
Methyl ethyl ketone	78-93-3
Methyl isobutyl ketone	108-10-1
Tetrachloroethylene	127-18-4
Toluene	108-88-3
1,1,1,-Trichloroethane	71-55-6
Trichloroethylene	79-01-6
Trichlorofluoromethane	75-69-4
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1
Vinyl chloride	75-01-4

Xylene	1330-20-7

FOOTNOTE: [1]When testing for any or all of these analytes, the zero-headspace extractor vessel shall be used instead of the bottle extractor.

FOOTNOTE: [2]Benzene, carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorethane, 1,1-dichloroethylene, methyl ethyl ketone, tetrachloroethylene, trichloroethylene, and vinyl chloride are toxicity characteristic constituents.

Table 2. – Suitable Rotary Agitation Apparatus[1]

Company	Location	Model No.
Analytical Testing and Consulting Services, Inc.	Warrington, PA, (215) 343-4490	4-vessel (DC20S), 8-vessel (DC20), 12-vessel (DC20B).
Associated Design and Manufacturing Company	Alexandria VA, (703) 549-5999	2-vessel (3740-2), 4-vessel (3740-4), 6-vessel (3740-6), 8-vessel (3740-8), 12-vessel (3740-12), 24-vessel (3740-24).
Environmental Machine and Design, Inc.	Lynchburg, VA, (804) 845-6424	8-vessel (08-00-00) 4-vessel (04-00-00).
IRA Machine Shop and Laboratory	Santurce, PR, (809) 752-4004	8-vessel (011001).
Lars Lande Manufacturing	Whitmore Lake, MI, (313) 449-4116	10-vessel (01VRE), 5-vessel (5VRE).
Millipore Corp.	Bedford, MA, (800) 225-3384	4-ZHE or 4 1-liter, bottle extractor, (YT30ORAHW).

FOOTNOTE: [1]Any device that rotates the extraction vessel in an end-over-end fashion at 30 ± 2 rpm is acceptable.

Table 3. – Suitable Zero-Headspace Extractor Vessels[1]

Company	Location	Model No.
Analytical Testing & Consulting Services, Inc.	Warrington, PA, (215) 343-4490	C102, Mechanical Pressure Device.
Associated Design and Manufacturing Company	Alexandria VA, (703) 549-5999	3745-ZHE, Gas Pressure Device.
Lars Lande Manufacturing[2]	Whitmore Lake, MI, (313) 449-4116	ZHE-11, Gas Pressure Device.
Millipore Corporation	Bedford, MA, (800) 225-3384	YT30090HW, Gas Pressure Device.
Environmental Machine and Design, Inc.	Lynchburg, VA, (804) 845-6424	VOLA-TOX1, Gas Pressure Device.

FOOTNOTE: [1]Any device that meets the specifications listed in section 4.2.1. of the method is acceptable.

FOOTNOTE: [2]This device uses a 110 mm filter.

Table 4. – Suitable Filter Holders[1]

Company	Location	Model/catalogue No.	Size

Nucleopore Corporation	Pleasanton, CA, (800) 882-7711	425910 410400	142mm, 47 mm.
Micro Filtration Systems	Dublin, CA, (800) 334-7132, (415) 828-6010	302400 311400	142 mm, 47 mm.
Millipore Corporation	Bedford, MA, (800) 225-3384	YT30142HW XX1004700	142 mm, 47 mm.

FOOTNOTE: [1]Any device capable of separating the liquid from the solid phase of the waste is suitable, providing that it is chemically compatible with the waste and the constituents to be analyzed. Plastic devices (not listed above) may be used when only inorganic analytes are of concern. The 142 mm size filter holder is recommended.

Table 5. – Suitable Filter Media[1]

Company	Location	Model	Pore Size (μm)
Millipore Corporation	Bedford, MA, (800) 225-3384	AP40	0.7
Nucleopore Corporation	Pleasanton, CA, (415) 463-2530	211625	0.7
Whatman Laboratory Products, Inc.	Clifton, NJ, (201) 773-5800	GFF	0.7
Micro Filtration Systems	Dublin, CA, (800) 334-7132, (415) 828-6010	GF75	0.7

FOOTNOTE: [1]Any filter that meets the specifications in section 4.4 of the Method is suitable.

[55 FR 11863, Mar. 29, 1990; 55 FR 26987, June 29, 1990]

APPENDIX IX

BASIS FOR LISTING HAZARDOUS WASTE

Appendix IX
Basis for Listing Hazardous Waste

EPA Hazardous Waste Number	Hazardous constituents for which listed
F001.....	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichlorethane, carbon tetrachloride, chlorinated fluorocarbons.
F002.....	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane.
F003.....	N.A.
F004.....	Cresols and cresylic acid, nitrobenzene.
F005.....	Toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, 2-ethoxyethanol, 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 tetrachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.
F024.....	Chloromethane, dichloromethane, trichloromethane, carbon tetrachloride, 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-butadiene, hexachlorocyclopentadiene, hexachlorocyclohexane, benzene, chlorbenzene, dichlorobenzenes, 1,2,4-trichlorobenzene, tetrachlorobenzene, pentachlorobenzene, hexachlorobenzene, toluene, naphthalene.
F026.....	Tetra-, penta-, and hexachlorodibenzo-p-dioxins; tetra-, penta-, and

hexachlorodibenzofurans.

F027..... Tetra-, 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 hexachlorodibenzofurans; tri-, tetra-, and pentachlorophenols and their chlorophenoxy derivative acids, esters, ethers, amine and other salts.

K001..... Pentachlorophenol, phenol, 2-chlorophenol, p-chloro-m-cresol, 2,4-dimethylphenol, 2,4-dinitrophenol, trichlorophenols, tetrachlorophenols, 2,4-dinitrophenol, creosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benz(a)pyrene, indeno(1,2,3-cd)pyrene, benz(a)anthracene, dibenz(a)anthracene, acenaphtalene.

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(choromethyl) ether and bis(2-chloroethyl)ethers], trichloropropane, dichloropropanols.

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-tetrachloroethane), 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, chrysene, 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
K047..... N.A.
K048..... Hexavalent chromium, lead.
K049..... Hexavalent chromium, lead.
K050..... Hexavalent chromium.
K051..... Hexavalent chromium, lead.
K052..... Lead.
K060..... Cyanide, naphthalene, 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, hexacholroethane, 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.
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.
K115..... 2,4-Toluenediamine.
K116..... Carbon tetrachloride, tetrachloroethylene, chloroform, phosgene.
K117..... Ethylene dibromide.
K118..... Ethylene dibromide.
K123..... Ethylene thiourea.
K124..... Ethylene thiourea.
K125..... Ethylene thiourea.
K126..... Ethylene thiourea.
K136..... Ethylene dibromide.

N.A. - Waste is hazardous because it fails the test for the characteristic of ignitability, corrosivity, or reactivity.

APPENDIX X

CLASSIFICATION OF PERMIT MODIFICATIONS

Appendix X
Classification of Permit Modifications

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 Secretary	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 Secretary	1*
7. Changes in ownership or operational control of a facility, provided the procedures of §270.40(b) are followed	1*
B. General Facility Standards	
1. Changes to waste sampling or analysis methods:	
a. To conform with agency guidance or regulations	1
b. Other changes	2
2. Changes to analytical quality assurance/control plan:	
a. To conform with agency guidance or regulations	1
b. Other changes	2

Modifications	Class
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
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.	
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 Secretary	1*

Modifications	Class
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 Secretary	1*
4. Changes in point of compliance	2*
5. Changes in indicator parameters, hazardous constituents, or concentration limits (including ACLs):	
a.As specified in the groundwater protection standard	3
b. As specified in the detection monitoring program	2
6. Changes to a detection monitoring program as required by §264.98(j), unless otherwise specified in this appendix	2
7. Compliance monitoring program:	
a.Addition of compliance monitoring program as required by §§264.98(h)(4) and 264.99	3
b. Changes to a compliance monitoring program as required by §264.99(k), unless otherwise specified in this appendix	2
8. Corrective action program:	
a. Addition of a corrective action program as required by §§264.99(i)(2) and 264.100	3
b. Changes to a corrective action program as required by §264.100(h), unless otherwise specified in this Appendix	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 Secretary	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 Secretary	1*
c. Changes in the expected year of final closure, where other permit conditions are not changed, with prior approval of the Secretary	1*

Modifications	Class
d. Changes in procedures for decontamination of facility equipment or structures, with prior approval of the Secretary	1*
e. Changes in approved closure plan resulting from unexpected events occurring during partial or final closure, unless otherwise specified in this appendix	2
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 §264.250(c)	3
d. Waste piles that comply with §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 Secretary	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 changed	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)	2

Modifications	Class
below	
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 §268.8(a)(2)(ii), with prior approval of the Secretary. 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*
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 §270.42(g) for modification procedures to be used for the management of newly listed or identified wastes.	
4. Storage of 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 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 §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 a change in the treatment process or management standards, and provided that the units have previously received wastes of the same type	

Modifications	Class
(e.g., incinerator scrubber water). This modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028)	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 Secretary, 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*
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 §268.8(a)(2)(ii), with prior approval of the Secretary. 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*
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	1
-- 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 in the permit	

Modifications	Class
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
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 §268.8(a)(2)(ii). The modification is not applicable to dioxin-containing wastes (F020, 021, 022, 023, 026, 027, and 028)	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, and 028)	1
Note: See §270.42(g) for modification procedures to be used for the management of newly lilsted 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

Modifications	Class
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 §269.8(a)(2)(ii), and provided that the unit meets the minimum technological requirements stated in §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 §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
Note: See §270.42(g) for modification procedures to be used for the management of newly listed or identified wastes	
I. Enclosed Waste Piles. For all waste piles except those complying with §264.250(c), modifications are treated the same as for a landfill. The following modifications are applicable only to waste piles complying with §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	

Modifications	Class
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
Note: See §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
c. That are wastes restricted from land disposal that meet the	

Modifications	Class
applicable treatment standards or that are treated to satisfy the standard of "use of practicallyavailable technology that yields the greatest environmental benefit" contained in §268.8(a)(2)(ii), and provided that the landfill unit meets the minimum technological requirements stated in §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 landfill unit that meets the minimum technological requirements stated in §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
Note: See §270.42(g) for modification procedures to be used for the management of newly listed or identified wastes.	
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 §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

Modifications	Class
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 §264.278(g)(2)	3
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 Secretary's prior approval has been received	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 Secretary	1*

Modifications	Class
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	
1. Changes to increase by more than 25% any of the following limits authorized in the permit: A thermal feed rate limit, a waste feed rate limit, or an organic chlorine feed rate limit. The Secretary 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 waste feed limit, or an organic chlorine feed rate limit. The Secretary 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 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 or particulate from the combustion gases, or by changing other features of the incinerator that could affect its capability to meet the regulatory performance standards. The Secretary 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 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 Secretary may require a new trial burn to demonstrate compliance with the regulatory performance standards	2
5. Operating requirements:	

Modifications	Class
a.Modification of the limits specified in the permit for minimum combustion gas temperature, minimum combustion gas residence time, or oxygen concentration in the secondary combustion chamber. The Secretary 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
6. Incineration of different wastes:	
a.If the waste contains a POHC that is more difficult to incinerate than authorized by the permit or if incineration of the waste requires compliance with different regulatory performance standards than specified in the permit. The Secretary 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 incinerate than authorized by the permit and if incineration of the waste does not require compliance with different regulatory performance standards than specified in the permit	2
Note: See §270.42(g) for modification procedures to be used for the management of newly listed or identified wastes.	
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 incineration during the shakedown period for determining operational readiness after construction, with the prior approval of the Secretary	1*
c. Changes in the operating requirements set in the permit for conducting trial burn, provided the change is minor and has	

Modifications	Class
received the prior approval of the Secretary	1*
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 Secretary	1*
8. Substitution of an alternate type of fuel that is not specified in the permit	1

* Class 1 modifications requiring prior Agency approval.