STATE OF WEST VIRGINIA
DEPARTMENT OF NATURAL RESOURCES
CHARLESTON 25305

JOHN D. ROCKEFELLER IV
Governor

October 4, 1983

DAVID C. CALLAGHAN
Director

WILLIS H. HERTIG, JR.
Deputy Director

The Honorable A. James Manchin
Secretary of State
State Capitol
Charleston, West Virginia 25305

Dear Mr. Secretary:

Enclosed are two (2) copies each of the State Register Filing Form as prescribed by your office and Emergency Regulations as authorized by Chapter 29A-3-15 regarding the Hazardous Waste Management Regulations, Chapter 20-5E, Series XV, Section 5.00 - page 90 (Standards Applicable to Transporters of Hazardous Waste by Air and/or Water) and Section 13.00 - page 342 (Financial Requirements). These Emergency Regulations were originally filed on March 16, 1983 and are being refiled this date. A statement of the facts and circumstances constituting the emergency which continues to be effective as of this filing date is also attached.

I hereby certify that the enclosed are true and accurate copies of the official regulations promulgated by me on this the 4th day of October, 1983.

Sincerely,

David C. Callaghan, Director
Department of Natural Resources

DCC/mcd

Enclosures

cc: The Honorable John D. Rockefeller IV
Legislative Rule Making Review Committee (15 copies)

FILED IN THE OFFICE OF
A. JAMES MANCHIN
SECRETARY OF STATE
THIS DATE Oct. 4, 1983
Administrative Law Division

STATE OF WEST VIRGINIA

OFFICE OF THE SECRETARY OF STATE

CHARLESTON 25305

A. JAMES MANCHIN
SECRETARY OF STATE

STATE REGISTER FILING

I, David C. Callaghan, Director
Title or Position

Department of Natural Resources, hereby submit to record in
Department or Division

the State Register on 8 1/2 x 11" paper two (2) copies of

( ) proposed rules and regulations concerning topics of material not covered by existing rules and regulations;

( ) proposed rules and regulations superseding rules and regulations already on file;

( ) notice of hearing;

( ) findings and determinations;

( ) rules and regulations; or

(X) other - specify: refiling Emergency Regulations - Hazardous Waste Management Regulations

This filing pertains to

Chapter 20
Article 5E
Series XV
Section 5.00
Page No. 90

FILED IN THE OFFICE OF
A. JAMES MANCHIN
SECRETARY OF STATE
THIS DATE 10/4/83
Administrative Law Division

(X) proposed rules and regulations are required to go to Legislative Rule Making Committee;

( ) proposed rules and regulations are excluded from Legislative Rule Making Committee;

Date Submitted

Signature of Person Authorizing this Filing

Section 5.00 Standards Applicable to Transporters of Hazardous Waste by Air and/or Water.

The Director hereby adopts and incorporates by reference 40 C.F.R. Part 263, as published in the Code of Federal Regulations on July 1, 1982 insofar as such regulations relate to the transportation of hazardous waste by air and water.

Whenever the term Administrator or Regional Administrator is used, the term shall have the meaning of the Director of the Department of Natural Resources.

TRANSPORTATION OF HAZARDOUS WASTE BY AIR OR WATER

STATEMENT OF EMERGENCY

West Virginia Code § 20-5E-7(a) requires the Commissioner of Highways to promulgate rules and regulations governing the transportation of hazardous waste by vehicle upon the roads and highways of the State. Similarly § 20-5E-7(6) of the Act requires the Public Service Commission to promulgate rules and regulations governing transportation of hazardous waste by railroad in the State. However, no specific provisions was made for regulatory authority by any agency to promulgate regulations for air or water transportation of hazardous waste. Yet the Director, under § 20-5E-6 is empowered to promulgate rules and regulations as are necessary to effectuate the purposes of the Act, and the Water Resources Board is given authority under § 20-5E-7(i) to promulgate rules and regulations governing discharges into the waters from hazardous waste facilities.

The Director is also required to perform any and all acts necessary to carry out the purposes and requirements of Subtitle C of the Solid Waste Disposal Act.

The Federal Solid Waste Disposal Act and the regulations promulgated thereunder establishes deadlines for States to apply for interim or full authorization. In such application the State has to demonstrate substantial equivalency to the Federal program in order to operate their program in lieu of the Federal government.

Representatives from the Federal Environmental Protection Agency have determined that absence or ommission of regulations governing transportation by air and water of hazardous wastes leaves the State program fatally defective, and ineligible for interim or full authorization.

Consequently, the promulgation of these regulations as emergency regulations is necessary to meet a time deadline established by a Federal statute.

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This filing pertains to

Chapter 20
Article 5E
Series XV
Section 13.00
Page No. ~~342~~ 247

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Section 13.00 Financial Requirements

The Director hereby adopts and incorporates by reference 40 C.F.R. Part 264, Subpart H, as published in the Code of Federal Regulations on July 1, 1982 with the following modifications: Sections 264.143(f), § 264.145(f), and § 264.147(f), shall be amended by the addition of the following paragraph:

"Notwithstanding the above, the Director may disallow use of this test on the basis of information that the owner or operator has violated or is in violation of any state or federal law or regulation pertaining to environmental protection. The owner or operator must provide alternate financial assurance as specified in this section within 30 days after notification of the disallowance."

Section 264.149 and § 264.150 shall be deleted.

Whenever the term Administrator or Regional Administrator is used, the term shall have the meaning of the Director of the Department of Natural Resources.

STATEMENT OF EMERGENCY

FINANCIAL RESPONSIBILITY

West Virginia Code § 20-5E-6(a)(4) requires the Director of the Department of Natural Resources to promulgate within six months of the effective date of the Act (July 9, 1981):

> "Rules and regulations establishing such performance standards applicable to owners and operators of facilities for the treatment, storage or disposal of hazardous waste identified or listed under this article as may be necessary to protect public health and safety and the environment, which standards shall, where appropriate, distingquish in such standards between requirements appropriate for new facilities and for facilities in existence on the date of promulgation of such rules and regulations and shall include, but need not be limited to, requirements respecting: (A) maintaining records of all hazardous wastes identified or listed under this article which are treated, stored or disposed of, as the case may be, and the manner in which such wastes were treated, stored or disposed of; (B) satisfactory reporting, monitoring and inspection and compliance with the manifest system referred to in subdivision (3), subsection (a) of this section; (c) treatment, storage or disposal of all such waste received by the facility pursuant to such operating methods, techniques and practices as may be satisfactory to the directors; (D) the location, design and construction of such hazardous waste treatment, disposal or storage facilities; (E) contingency plans for effective action to minimize unanticipated damage from any treatment, storage or disposal of any such hazardous waste; (F) the maintenance of operation of such facilities and requiring such additional qualifications as to ownership, continuity of operation, training for personnel and financial responsibility as may be necessary or desirable; however, no private entity may be precluded by reason of criteria established under this subsection from the ownership or operation of facilities providing hazardous waste treatment, storage or disposal services where such entity can provide assurances of financial responsibility and continuity of operation consistent with the degree and duration of risks associated with the treatment, storage or disposal of specified hazardous waste; and (G) compliance with the requirements of section eight of this article respecting permits for treatment, storage or disposal."

All of the regulations referred to above were promulgated by the Director on March 24, 1982, except for the financial responsiblity regulations required in subsection (F).

Therefore, the promulgation of the financial responsibility regulations is proper inasmuch as such regulations are necessary to comply with the time limitation established by the West Virginia Code § 20-5E-6. Furthermore, the emergency promulgation of the financial responsibility regulations meets the test of an "emergency" because of deadlines established by Federal statute and regulations on when States must apply for either interim or full authorization.

West Virginia § 20-5E-5(a) requires the Director to do ". . . any and all Acts necessary to carry out the purposes and requirements of Subtitle C of the Solid Waste Disposal Act".

Finally, these regulations meet the requirements of an "emergency" in that such regulations are necessary to prevent substantial harm to the public interest. These regulations require facilities to employ various methods of demonstrating financial responsibility for adequate closure and post closure of hazardous waste facilities. The Legislature found as stated in West Virginia Code § 20-5E-2 that:

> "[T]he public health and safety and the environment are threatened where hazardous wastes are not managed in an environmentally sound manner . . ."

The Legislature declared further that the purpose of Chapter 20, Article 5E was " . . . to protect the public health and safety, and the environment from the effect of the improper management of hazardous waste and to assume . . . the safe and adequate management of hazardous waste within the State . . ."

For all of the reasons cited above, it is submitted that such rules must be promulgated on an emergency basis.

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Section 14.00 [Reserved.]

Section 15.00 Deed and Lease Disclosures; Approval for Land Disturbance.

Section 15.01 Notice in Deed to Property.

(a) The owner of the property on which a hazardous waste management facility is located must record, in accordance with State law, a notation on the deed or lease to the facility property -- or on some other instrument which is normally examined during title search -- that will in perpetuity notify any potential purchaser of the property that:

(1) The land has been used to manage hazardous wastes;

(2) Its use is restricted under Section 8.06.07(c); and

(3) The survey plat and record of the type, location, and quantity of hazardous wastes disposed of within each cell or area of the facility have been filed with the Chief.

(b) Upon actual transfer of property which contains hazardous wastes that have been stored, treated or disposed of, the previous owner shall notify the Chief, in writing, of such transfer, except if such wastes have been properly removed as outlined in Section 15.01(c).

(c) If at any time the owner or operator or any subsequent owner of the land upon which a hazardous waste disposal facility was located obtained approval by the Chief to remove the waste and waste residues, the liner, if any, and all contaminated underlying and surrounding soil, he may remove the notation on the deed to the facility property or other instrument normally examined during title search, or he may add a notation to the deed or instrument indicating the removal of the waste.

[Comment: On removing the waste and waste residues, the liner, if any, and the contaminated soil, the owner or operator, unless it can be demonstrated that any waste removed is not a hazardous

waste, becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements.]

Section 15.02 Approval for Land Disturbance.

(a) Before the owner or operator or any subsequent owner of the land upon which a hazardous waste disposal facility was located, engages in filling, grading, excavating, building, drilling, or mining on the property, or engaging in any activity which will disturb the closure of said area, the Chief of the Division of Water Resources must be notified and the owner or operator shall obtain authorization for such activity.

(b) If the owner or operator removes the waste from the property, a notation may be added to the deed or lease indicating such removal.

[Comment: On removing the waste and waste residues, the liner, if any, and the contaminated soil, the owner or operator, unless it can be demonstrated that any waste removed is not a hazardous waste, becomes a generator of hazardous waste and must manage it in accordance with all applicable requirements.]

Section 15.03 Other Requirements.

Nothing contained herein shall relieve any person from complying with the requirements on deed and lease disclosures set forth in § 20-5E-20.

Section 16.00 Notices of Changes to the Board or the Director.

Persons desiring to call to the attention of the Board or Director amendments to the federal Solid Waste Disposal Act, as amended, or regulations promulgated pursuant thereto, may do so by filing a notice with the Board or Director, as appropriate, identifying the amendment which has been made to the federal Solid Waste Disposal Act, as amended, or regulations promulgated pursuant thereto and identifying the provision of these regulations which such person believes should be amended.

PROMULGATION HISTORY

These legislative regulations (proposed) were filed with the Office of the Secretary of State on September 14, 1981 jointly by the Director of the Department of Natural Resources and the State Water Resources Board.

The public notice date also was September 14, 1981 - hearings held in Morgantown on October 19, 1981 and again in Charleston, West Virginia on October 20, 1981.

The final certified copies adopted by the Director and the Board were filed with the Secretary of State on March 24, 1982 with the effective date of April 24, 1982.

Section 13.00 Financial Requirements

The Director hereby adopts and incorporates by reference 40 C.F.R. Part 264, Subpart H, as published in the Code of Federal Regulations on July 1, 1982 with the following modifications: Sections 264.143(f), § 264.145(f), and § 264.147(f), shall be amended by the addition of the following paragraph:

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Chapter 20
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Section 5.00
Page No. ~~95~~ 88

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WILLIS H. HERTIG, JR.
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cc: The Honorable John D. Rockefeller IV
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TRANSPORTATION OF HAZARDOUS WASTE BY AIR OR WATER

STATEMENT OF EMERGENCY

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Representatives from the Federal Environmental Protection Agency have determined that absence or ommission of regulations governing transportation by air and water of hazardous wastes leaves the State program fatally defective, and ineligible for interim or full authorization.

Consequently, the promulgation of these regulations as emergency regulations is necessary to meet a time deadline established by a Federal statute.

STANDARDS APPLICABLE TO GENERATORS OF HAZARDOUS WASTE

Section 6.00 General.

Section 6.01 Purpose, Scope and Applicability.

(a) This Section establishes standards and regulations for generators of hazardous wastes.

(b) A generator who treats, stores, or disposes of hazardous waste on-site must only comply with the following subsections of this Section with respect to that waste: 6.01.01 for determining whether his waste is hazardous; 6.01.02 for obtaining an EPA identification number; 6.04.01(c) and (d) for recordkeeping; 6.04.04 for additional reporting; and, if applicable; 6.05.02 for Farmers.

(c) Any person who imports hazardous waste into West Virginia shall comply with the standards applicable to generators established in this section.

(d) A farmer who generates waste pesticides which are hazardous wastes and who complies with all the requirements of Section 6.05.01 is not required to comply with the remainder of these regulations with respect to such pesticides.

(e) A person who generates a hazardous waste, as defined in Section 3.00 is subject to the compliance requirements and penalties prescribed in Sections 14, 15 and 16 of the Hazardous Waste Management Act if he does not comply with the requirements of this section.

(e) An owner or operator who initiates a shipment of hazardous waste from a treatment, storage, or disposal facility

must comply with the generator standards established in this Section.

6.01.01 Hazardous Waste Determination.

A person who generates a waste, as defined in Section 3.01.01, shall determine if that waste is a hazardous waste using the following method:

(a) He shall first determine if the waste is excluded from regulation under Section 3.01.03.

(b) He shall then determine if the waste is listed as hazardous waste in Section 3.04.

[Note: Even if the waste is listed, the generator still has an opportunity under 40 C.F.R. 260.22 of the federal regulations to demonstrate that the waste from his particular facility or operation is not a hazardous waste.]

(c) If the waste is not listed as a hazardous waste in Section 3.04, the generator shall determine whether the waste is identified in Section 3.03 by either:

(1) Testing the waste according to the methods set forth in Section 3.03, or according to an equivalent method approved by the Administrator under the procedure outlined in 40 C.F.R. § 260.21; or

(2) Applying knowledge of the hazard characteristics of the waste in light of the materials or the processes used.

(d) Generator may elect to voluntarily declare his wastes as hazardous and subject to these regulations.

6.01.02 EPA Identification Numbers.

(a) A generator shall not treat, store, dispose of, transport, or offer for transportation, hazardous waste without

having received an EPA identification number from the Administrator.

(b) A generator who has not received an EPA identification number may obtain one by applying to the Administrator using EPA Form 8700-12. Upon receiving the request, the Administrator will assign an EPA identification number to the generator.

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

Section 6.02 The Manifest.

6.02.01 General Requirements.

(a) A generator who transports, or offers for transportation, hazardous waste for off-site treatment, storage, or disposal must prepare a manifest before transporting the waste off-site.

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

(c) A generator may also designate on the manifest one alternate facility which is permitted to handle his waste in the event an emergency prevents delivery of the waste to the primary designated facility.

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

6.02.02 Required Information.

(a) The manifest must contain all of the following information:

(1) A manifest document number;

(2) The generator's name, mailing address, telephone number, and EPA identification number;

(3) The name and EPA identification number of each transporter;

(4) The name, address and EPA identification number of the designated facility and an alternate facility, if any;

(5) The description of the waste(s) (e.g., proper shipping name, etc.) required by regulations of the U.S. Department of Transportation in 49 C.F.R. § 172.101, § 172.202, and § 172.203;

(6) The total quantity of each hazardous waste by units of weight or volume, and the type and number of containers as loaded into or onto the transport vehicle.

(b) The following certification must appear on the manifest: "This is to certify that the above named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and the EPA."

6.02.03 Number of Copies.

The manifest consists of at least the number of copies which will provide the generator, each transporter, and the owner or operator of the designated facility with one copy for their records and another copy to be returned to the generator.

6.02.04 Use of the Manifest.

(a) The generator must:

(1) Sign the manifest certification by hand; and

(2) Obtain the handwritten signature of the initial transporter and date of acceptance on the manifest; and

(3) Retain one copy, in accordance with Section 6.04.01(a).

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

(c) For shipments of hazardous waste within the United States solely by water (bulk shipments only), the generator must send three copies of the manifest dated and signed in accordance with this section to the owner or operator of the designated facility or the last water (bulk shipment) transporter to handle the waste in the United States if exported by water. Copies of the manifest are not required for each transporter.

(d) For rail shipments of hazardous waste within the United States which originate at the site of generation, the generator must send at least three copies of the manifest dated and signed in accordance with this Section to:

(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.

Section 6.03 Pre-Transport Requirements.

6.03.01 Packaging: Before transporting hazardous waste or offering hazardous waste for transportion off-site, a generator shall package the waste in accordance with the applicable

Department of Transportion (DOT) regulations on packaging under 49 C.F.R. Parts 173, 178 and 179.

6.03.02 Labeling: Before transporting or offering hazardous waste for transportation off-site, a generator shall label each package in accordance with the applicable Department of Transportation regulations on hazardous materials, under 49 C.F.R. Part 172.

6.03.03 Marking:

(a) Before transporting or offering hazardous waste for transportion off-site, a generator shall mark each package of hazardous waste in accordance with the applicable Department of Transportion regulation on hazardous materials under 49 C.F.R. Part 172;

(b) Before transporting hazardous waste or offering hazardous waste for transportion off-site, a generator shall mark each container of 110 gallons or less used in such transportion with the following words and information displayed in accordance with the requirements of 49 C.F.R. § 172.304:

"HAZARDOUS WASTE" - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency.

Generator's Name and Address _____.

Manifest Document Number _____.

6.03.04 Placarding: Before transporting hazardous waste or offering hazardous waste for transportation off-site, the generator shall placard or offer the initial transporter the appropriate

placards according to Department of Transportation regulations for hazardous materials under 49 C.F.R. Part 172, Subpart F.

6.03.05 Accumulation Time.

(a) A generator may accumulate hazardous waste on-site without a permit or without having interim status, provided that:

(1) All such waste is, within ninety (90) days, shipped off-site to a designated facility or placed in an on-site facility that is permitted under Section 11.00 of these regulations, or permitted under 40 C.F.R. Part 122 of the federal regulations, or has interim status under Section 11.00 of these regulations, or is authorized to manage hazardous waste by a state with a hazardous waste program approved by EPA;

(2) The waste is placed in containers which meet the standards of Section 6.03.01 and are managed in accordance with 40 C.F.R. § 265.174 and § 265.176 or in tanks, provided the generator complies with Subpart J of 40 C.F.R. Part 265 except § 265.193;

(3) The date upon which each period of accumulation begins is clearly marked and visible for inspection on each container.

(4) Each container is properly labeled and marked according to Sections 6.03.02 and 6.03.03; and

(5) The generator complies with the requirements for owners or operators in Subparts C and D in 40 C.F.R. Part 265 and with § 265.16.

(b) A generator who accumulates hazardous waste for more than ninety (90) days is an operator of a storage facility and is subject to the applicable requirements of Sections 4.00, 8.00, 12.00, 40 C.F.R. Part 265 and the permit requirements of Section 11.00.

Section 6.04 Recordkeeping and Reporting

6.04.01 Recordkeeping.

(a) A generator shall keep a copy of each manifest signed in accordance with 6.02.04(a) for three years or until he receives a signed copy from the designated facility which received the waste. This signed copy must be retained as a record for at least three years from the date the waste was accepted by the initial transporter.

(b) A generator shall keep a copy of each Annual Report and Exception Report for a period of at least three years from the due date of the report.

(c) A generator shall keep records of any test results, waste analyses, or other determinations made in accordance with 6.01.01 for at least three years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal.

(d) The periods or retention referred to in this section are extended automatically during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Chief or Director.

6.04.02 Annual Reporting.

(a) A generator who ships hazardous waste off-site shall submit Annual Reports to the Chief as follows:

(1) On EPA Form 8700-13 and 8700-13a, according to the instructions on the form or other forms approved by the Chief.

(2) No later than March 1 for the preceding calendar year.

(b) Any generator who treats, stores, or disposes of hazardous waste on-site shall submit an Annual Report covering

those wastes in accordance with the provisions of Sections 8.00 and 11.00 of these regulations, and 40 C.F.R. Part 265.

6.04.03 Exception Reporting.

(a) A generator, who does not receive a copy of the manifest with the handwritten signature of the authorized representative of the facility within 35 days of the date the waste was accepted by the initial transporter, shall contact the transporter and/or the owner or operator of the designated facility to determine the status of the hazardous waste. [Note: For the purposes of this Section, "authorized representative" means the person responsible for the overall operation of a facility or an operational unit (i.e., part of a facility) e.g., the plant manager, superintendent or person of equivalent responsibility.]

(b) A generator shall submit an Exception Report to the Chief if he has not received a copy of the manifest with the handwritten signature of the authorized representative of the designated faciltiy within forty-five (45) days of the date the waste was accepted by the initial transporter. The Exception Report must include:

(1) A legible copy of the manifest for which the generator does not have confirmation of delivery.

(2) A cover letter signed by the generator or his authorized representative explaining the efforts taken to locate the hazardous waste and the results of those efforts.

(3) In case of interstate shipments which originated in the State for delivery to a designated facility in another State, an additional copy of the Exception Report will be provided to the Chief for transmittal to that State or EPA as provided for in 40 C.F.R. § 123.128(b)(8).

6.04.04 Additional Reporting.

The Chief, as he deems necessary, may require generators to furnish additional reports concerning the quantities and disposition of hazardous wastes identified or listed in Section 3.00.

Section 6.05 Special Conditions.

6.05.01 International Shipments.

(a) Any person who exports hazardous waste to a foreign country or imports hazardous waste from a foreign country into West Virginia shall comply with the special requirements regulations.

(b) When shipping hazardous waste outside the United States the generator shall:

(1) Notify the Chief in writing four weeks before the initial shipment of hazardous waste to each country in each calendar year. The waste shall be identified by its EPA hazardous waste identification number and its Department of Transportation shipping description. The name an address of the foreign consignee shall be included in the notice.

(2) Send the original of the notice to Hazardous Waste Export, Division of Oceans and Regulatory Affairs (A-107), U.S. Environmental Protection Agency, Washington, D.C. 20460, and one copy to the Chief, Division of Water Resources.

(3) Require that the foreign consignee confirm the delivery of the waste in the foreign country. A copy of the manifest, signed by the foreign consignee, may be used for this purpose.

(4) Meet the requirements under Section 6.02.02 for the manifest, except that:

(i) In place of the name, address and EPA identification number of the designated facility, the name and address of the foreign consignee shall be used;

(ii) The generator shall identify the point of departure from the United States through which the waste shall travel before entering a foreign country.

(c) A generator shall file and Exception Report, if:

(1) He has not received a copy of the manifest signed by the transporter stating the date and place of departure from the United States within 45 days from the date it was accepted by the initial transporter; or

(2) Within 90 days from the date the waste was accepted by the initial transporter, the generator has not received written conformation from the foreign consignee that the hazardous waste was received.

(d) When importing hazardous waste, a person shall meet all requirements of Section 6.02.02 for the manifest except that:

(1) In place of the generator's name, address and EPA identification number, the name and address of the foreign generator and the importer's name, address and EPA identification number shall be used.

(2) In place of the generator's signature on the certification statement, the U.S. importer or his agent shall sign and date the certification and obtain the signature of the initial transporter.

6.05.02 Farmers.

A farmer disposing of waste pesticides from his own use which are hazardous wastes is not required to comply with the standards in this Section or other standards in Section 8.00, 11.00 or 12.00,

or 40 C.F.R. Part 265, for those wastes, provided he triple rinses each emptied pesticide container in accordance with Section 3.01.06(b)(3) and disposes of the pesticide residues on his own farm in a manner consistent with the disposal instructions on the pesticide label.

Section 7.00 [Reserved.]

PREAMBLE

Introduction

In recognition of the express statutory provisions contained in § 20-5E et seq., regarding duplication and consultation, and for the purpose of achieving maximum effectiveness while imposing the least burden of duplicative requirements on those persons subject to these regulations, the Director has attempted in these regulations to create a workable hazardous waste management program. The complexity of the regulations and the number of rule-making agencies involved made this a difficult task, and there is likely to remain a number of areas which will require continued cooperation, coordination, and consultation among the agencies. Towards this effort, the Director of the Department of Natural Resources expects to employ the use of Memorandums of Agreement which will outline the specific areas of responsibilities between the various agencies, particularly with regard to the permits to be issued by the Chief of the Division of Water Resources and the Director of the Air Pollution Control Commission.

Summary of Specific Sections

Section 2 of these regulations contains the definitions of the words and phrases used in these regulations.

Section 3 of these regulations is promulgated by the Director of the Department of Natural Resources and provides the criteria for identifying a hazardous waste and a list of hazardous wastes that have been identified by the Director.

Section 4 of these regulations is promulgated by the Director of the Department of Natural Resources and contains the notification requirements applicable to those persons engaged in hazardous waste activities, and is promulgated pursuant to authority contained in § 20-5E-6(a)(12). The purpose of Section 4.00 is to provide a means for the State of West Virginia to obtain information from all persons who engage in hazardous waste activities.

Section 5 of these regulations, in its proposed form, established manifest requirements. In the final regulations, it has been deleted and all manifest requirements are contained in Section 6.

Section 6 of these regulations is being promulgated by the Director of the Department of Natural Resources and contains requirements for generators of hazardous waste which include recordkeeping, reporting, and originating a manifest for off-site shipments.

Section 7, in its proposed form, contained the requirements on transporters in the event of a discharge during the transportation of hazardous waste. These requirements have been deleted in the final regulations because the Director believes that the regulations promulgated by the Public Service Commission and the Department of Highways relating to spills during the transportation of hazardous waste provide adequate coverage.

In the final regulations, no provisions are made by the Director which specifically deal with the transportation of hazardous waste by aircraft or watercraft. The State Act specifically provided for rule-making related to transportation by highway and rail. It was silent as to the rule-making authority for requirements of the transporters of hazardous waste by aircraft and watercraft. However, the Director believes he has the general

authority to promulgate such requirements under the authority contained in § 20-5E-6(11) and intends, in the very near future, to propose requirements relating to the transportation of hazardous waste by aircraft and watercraft. Consequently, Section 7 has been reserved for this purpose.

Section 8 is promulgated jointly by the Department of Natural Resources and the Water Resources Board and establishes the standards for owners and operators of hazardous waste treatment, storage, and disposal facilities. Joint promulgation of these regulations was necessary because the standards in Section 8 apply to all facilities, not just facilities with discharges to the waters of the State. Initially, the Director and the Water Resources Board attempted to delineate the respective jurisdiction and responsibilities of the two rule-making bodies. However, it became apparent that promulgating rules and regulations along these lines would have made the final rules extremely complex and difficult to read and comprehend. Consequently, for the benefit of the regulated community, it was decided to jointly promulgate these rules and regulations with the Board.

Section 9, in its proposed form, contained standards for facility owners and operators to comply with during interim-status. These standards have been deleted in the final regulations inasmuch as § 20-5E-10 governs the hazardous waste activities of facilities during interim status. Section 9 has been reserved for future regulations to be promulgated either by the Board or Department of Natural Resources.

Section 10 is promulgated jointly by the Director of the Department of Natural Resources under authority of § 20-5E-6(a)(1), (a)(4), and (a)(12) and the Water Resources Board under authority of § 20-5E-7(i), and establishes the minimum national standards

that define the acceptable management of hazardous waste for new land disposal facilities. The reason for the joint promulgation is the same as was explained above in the summary of Section 8.

Section 11 of these regulations is also being promulgated jointly by the Director of the Department of Natural Resources and by the Water Resources Board. § 20-5E-6(a)(4) requires the Director to promulgate rules and regulations respecting compliance with permits for treatment, storage, or disposal under § 20-5E-8. Additionally, the Director is required by § 20-5E-6(a)(5) to promulgate rules and regulations specifying the terms and conditions under which the Chief shall issue, modify, suspend, revoke, or deny permits. The Water Resources Board is also given rule-making authority in § 20-5E-7(i) to promulgate rules and regulations respecting the issuance, modification, suspension, revocation or denial of permits relating to discharges into the waters of the State from the treatment, storage, or disposal of hazardous waste. Because these statutory provisions are somewhat ambiguous as to who should actually promulgate rules and regulations relating to the Chief's permit, the Director has decided that the best way to reconcile these provisions is to promulgate the rules and regulations jointly with the Board. This approach will also spare the regulated community of having to cope with two and possibly three (depending on the approach taken by the Air Pollution Control Commission) sets of permitting requirements for different kinds of facilities or activities. Consequently, the Director and the Water Resources Board have agreed to promulgate Section 11 together.

Section 12 is promulgated jointly by the Director of the Department of Natural Resources under § 20-5E-6(a)(1), (a)(4), and (a)(12), and by the Water Resources Board under § 20-5E-7(i). This

section establishes the location standards for all hazardous waste management facilities.

Sections 13 and 14 establish financial responsibility requirements for existing and new facilities. These sections were reproposed on February 3, 1982, and will be promulgated in final form as soon as the Director reviews the public comments.

Section 15 establishes the requirements on deed and lease disclosures, and approvals for land disturbance.

Section 16 provides a mechanism for persons desiring to notify the Board or the Director of changes in the federal Solid Waste Disposal Act, or the regulations promulgated thereunder.

Section 1.00 General

1.01 Scope and Purpose.

The purpose of these regulations is to provide for the regulation of the generation, treatment, storage, and disposal of hazardous waste to the extent necessary for the protection of the public health and safety and the environment.

1.02 Authority.

These regulations are promulgated under the authority of the West Virginia Code Chapter 20, Article 5E, Sections 4, 5, 6, and 7.

1.03 Effective Date.

These regulations will become effective on

1.04 Filing Date.

These regulations were filed in the Office of the Secretary of State on

1.05 Certification.

These regulations are certified authentic by the Chairman of the State Water Resources Board and the Director of the Department of Natural Resources.

Section 2.00 Definitions.

For the purposes of these regulations, the following words and phrases shall have the meanings ascribed to them in this section unless the context of the regulations indicate otherwise.

(1) "Active portion" means that portion of a facility where treatment, storage or disposal operations are being conducted. It includes the treated area of a landfarm and the active face of a landfill, but does not include those portions of a facility which have been closed in accordance with all applicable closure requirements;

(2) "Administrator" means the administrator of the United States Environmental Protection Agency or his designee;

(3) "Approved form" means any Environmental Protection Agency standard national form for administering the hazardous waste provisions of RCRA, or a form approved by the Chief of the Division of Water Resources or the Director of the Department of Natural Resources;

(4) "Aquifer" means a geologic formation, group of formations, or part of a formation that is capable of yielding a significant amount of groundwater to wells or springs;

(5) "Application, Part A" means that part of the application which a permit applicant must complete to qualify for interim status under Section 3005(e) of RCRA or these regulations and for consideration for a permit;

(6) "Application, Part B" means that part of the application which a permit applicant must complete to be considered for a permit;

(7) "Calendar year" means January 1 through December 31;

(8) "Cell" means a discrete volume of a hazardous waste landfill which uses a liner to provide isolation of wastes from adjacent cells or wastes;

(9) "Chief" means the Chief of the Division of Water Resources of the Department of Natural Resources;

(10) "Closed facility" means a facility which has been properly closed in accordance with the facility closure plan and all applicable regulations and requirements;

(11) "Closed portion" means that portion of a facility which an owner or operator has closed in accordance with the facility closure plan and all applicable closure requirements;

(12) "Closure" means the act of securing a hazardous waste management facility pursuant to the requirements of these regulations;

(13) "Constituent or hazardous waste constituent" means a component which caused the Administrator or the Director to list the waste as hazardous;

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

(15) "Contingency plan" means a document setting out an organized, planned and coordinated course of actions to be followed in the event of a fire, explosion or release of hazardous waste or hazardous constituents which could threaten human health or environment;

(16) "Common code" means the unique code assigned by the Chemical Abstract Services (also known as the CAS Registry Number)

to each EPA hazardous waste and to each Department of Transportation hazardous waste material;

(17) "CWA" means the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act), Public Law 92-500, as amended by Public Law 95-217 and Public Law 95-576; 33 U.S.C. 1251 et seq.;

(18) "Designated facility (Designated hazardous waste management facility)" means a hazardous waste treatment, storage or disposal facility which has received a permit from the Environmental Protection Agency, this State, or another authorized state hazardous waste program or which has been granted interim status and has been designated on the manifest by the generator to receive a specific hazardous waste shipment;

(19) "Dike" means an embankment or ridge of either natural or man-made materials used to contain liquids, sludges, solids, or other materials;

(20) "Director" means the Director of the Department of Natural Resources;

(21) "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 State waters;

(22) "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking or placing of any hazardous waste into or on any land or water so that such hazardous waste or any constituent thereof

may enter the environment or be emitted into the air or discharged into any State waters;

(23) "Disposal facility" means a facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which the waste will remain after closure;

(24) "Division" means the Division of Water Resources of the Department of Natural Resources;

(25) "Domestic sewage" means untreated sanitary wastes that pass through a sewer system;

(26) "DOT" means the United States Department of Transportation;

(27) "Elementary neutralization unit" means a device which: (i) is used for neutralizing wastes which are hazardous only because they exhibit the corrosivity characteristic defined in Section 3.11 of these regulations, or are listed in Sections 3.14 through 3.17 only for this reason; and, (ii) meets the definition of a tank, container, or transport vehicle in this section;

(28) "Emergency permit" means a permit issued where an imminent and substantial endangerment to human health or the environment is determined to exist by the Director, or the Chief;

(29) "EPA" means the United States Environmental Protection Agency;

(30) "EPA hazardous waste number" means the number assigned by EPA to each hazardous waste listed in Section 3.04 of these regulations and to each characteristic identified in Section 3.03 of these regulations;

(31) "EPA identification number" means the number assigned by EPA to each hazardous waste generator, hazardous waste transporter or hazardous waste facility;

(32) "Equivalent method" means any testing or analytical method approved by the EPA Administrator under 40 C.F.R. Section 260.21;

(33) "Existing hazardous waste management facility or existing facility" means a facility which was in operation or for which construction commenced on or before July 10, 1981. Under this authority a facility has commenced construction if:

1. The owner or operator has obtained all necessary Federal, State and local approvals or permits to begin physical construction; and either
   a. A continuous physical, on-site construction program has begun, or
   b. The owner or operator has entered into contractural obligations (which cannot be cancelled or modified without substantial loss) for construction of the facility to be completed within a reasonable time;

(34) "Facility" - see, "hazardous waste management facility;"

(35) "Federal agency" means any department, agency, or other instrumentality of the Federal government, any independant agency or establishment of the Federal government including any government corporation and the Government Printing Office;

(36) "Federal, state, and local approvals or permits necessary to begin physical construction" means permits and approvals required

under federal, state, or local hazardous waste control statutes, regulations, or ordinances;

(37) "Final cover" means cover material that is applied upon closure of a landfill and is permanently exposed at the surface;

(38) "Flash point" means the minimum temperature at which a liquid or solid gives off sufficient vapor to form an ignitable vaper-air mixture near the surface of the liquid or solid. An ignitable mixture is one that, when ignited, is capable of the initiation and propagation of flame away from the source of ignition. Propagation of flame means the spread of the flame from layer to layer independant of the source of ignition;

(39) "Food chain crops" means tobacco, crops grown for human consumption, or crops grown for pasture, forage or feed for animals whose products are consumed by humans;

(40) "Foreign source" means a source outside the geographical boundaries of the continental United States;

(41) "Freeboard" means the vertical distance between the top of a surface impoundment, open tank, or other containment device and the surface of the waste contained therein;

(42) "Free liquids" means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure;

(43) "Generator" means any person, by site location, whose act or process produces hazardous waste identified or listed in Section 3.00 of these regulations or whose act first causes a hazardous waste to become subject to these regulations;

(44) "Groundwater" means water below the land surface in a zone of saturation;

(45) "Hazardous waste" means a hazardous waste as defined in Section 3.01.02 except as 3.01(b) provides otherwise.

(46) "Hazardous waste activity" means the handling of hazardous waste as in the generation, transportation, treatment, storage, or disposal of any hazardous waste;

(47) "Hazardous waste generation" means the act or process of producing hazardous waste materials;

(48) "Hazardous waste management" means the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery and disposal of hazardous wastes;

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

(50) "Incompatible waste" means a hazardous waste which is unsuitable for:

(i) Placement in a particular device or facility because it may cause corrosion or decay of containment materials; or

(ii) 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;

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

(52) "In operation" means facilities that are treating, storing or disposing of hazardous waste;

(53) "Injection well" means a well or bore hole into which fluids are injected;

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

(55) "Interim status" means the status obtained by any person who owns or operates a facility in existence, or existing, on July 10, 1981, and required to have a permit under these regulations. Such facilities will be treated as having been issued a permit until such time as final administrative disposition is made with respect to an application for such permit provided that such facility is operating and continues to operate in compliance with interim status requirements of Section 3005 of the Federal Solid Waste Disposal Act, and in such a manner as will not cause or create a substantial risk of

a health hazard or public nuisance or a significant adverse effect upon the environment;

(56) "International shipment" means the transportation of hazardous waste, into or out of the jurisdiction of the United States;

(57) "Landfill" means a disposal facility or part of a facility where hazardous waste is placed in or on land and which is not a land treatment facility, a surface impoundment, or an injection well;

(58) "Landfill cell" - see, "cell;"

(59) "Land treatment facility" means a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface; such facilities are disposal facilities if the waste will remain after closure;

(60) "Leachate" means liquid, including any suspended components in the liquid, that has percolated through or drained from hazardous waste;

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

(62) "Major facility" means a disposal or treatment facility which disposes or treats an amount of hazardous waste exceeding or equal to 1,000 tons during a calendar year, and any storage facility having a storage capacity for 1,000 tons of hazardous waste or more;

(63) "Manifest" means the form used for identifying the quantity, composition and the origin, routing and destination of hazardous waste during its transportation off-site from the point of generation to the point of disposal, treatment or storage;

(64) "Manifest document number" means the serial number assigned to the manifest by the generator for recordkeeping and reporting purposes;

(65) "Mining overburden returned to the mine site" means any material overlying an economic mineral deposit which is removed to gain accesss to that deposit and is then used for reclamation of a surface mine;

(66) "Monitoring" means all procedures used to inspect and quantify the chemical or physical characteristics of the air, State waters or soils;

(67) "Movement" means transportation of hazardous waste to a facility in an individual transportation vehicle;

(68) "New hazardous waste management facility or new facility" means a facility which began operation, or for which construction commenced after July 10, 1981. (See also, "existing hazardous waste management facility");

(69) "NPDES (National Pollutant Discharge Elimination System)" means the national program for issuing, modifying, revoking, re-issuing, terminating, monitoring and enforcing permits and imposing and enforcing pre-treatment requirements pursuant to Sections 307, 402, 318 and 405 of CWA. The term includes any approved state program;

(70) "On-site" means on the same or geographically contiguous property which may be divided by public or private rights-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 rights-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way which the person controls and to which the public does not have access, is also considered on-site property;

(71) "Operator" means the person responsible for the overall operation of a hazardous waste management facility;

(72) "Owner" means the person who owns a hazardous waste management facility or part of a hazardous waste management facility;

(73) "Packaging" means the assembly of one or more containers and any other components necessary to assure compliance with the minimum packaging requirements under 49 C.F.R. 173, 178, and 179 and includes containers (other than freight containers or overpacks), portable tanks, cargo tanks, tank cars and multi-unit tank car units;

(74) "Partial closure" means the closure of a discrete part of a facility in accordance with the applicable closure requirements of these regulations;

(75) "Permit by rule" means the provision of these regulations stating that a "facility or activity" is deemed to have a permit if it meets the requirements of such provision;

(76) "Permit" means a control document issued by this State pursuant to the Act and these regulations, or by other states having an authorized program pursuant to Section 3006 of RCRA or by the

EPA Aministrator pursuant to applicable Federal regulations, or a facility having "interim status;"

(77) "Permitted hazardous waste managment facility (or permitted facility)" means a hazardous waste treatment, storage, or disposal facility that has received an EPA RCRA permit, a RCRA permit from an authorized state pursuant to Section 3006 of RCRA, or a State permit in accordance with the requirements of these regulations, or a facility having "interim status;"

(78) "Person" means an individual, trust, firm, joint stock company, public, private or government corporation, partnership, association, State or Federal agency, the United States government, this State or any other State, municipality, county commission or any other political subdivision of a State or any interstate body;

(79) "Personnel or facility personnel" means all persons who work at, or oversee the operations of a hazardous waste management facility, and whose actions or failure to act may result in non-compliance with the requirements of these regulations;

(80) "Physical construction" or "construct" means excavation, movement of earth, erection of forms or structures, or similar activity involving the actual preparation of a hazardous waste management facility;

(81) "Pile" means any non-containerized accumulation of solid, non-flowing hazardous waste that is used for treatment or storage;

(82) "Point source" means any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling

stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture;

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

(84) "Representative sample" means a sample of a universe or whole which can be expected to exhibit the average properties of the universe or whole;

(85) "Run-off" means any rainwater, leachate, or other liquid that drains over land from any part of a facility;

(86) "Run-on" means any rainwater, leachate, or other liquid that drains over land onto any part of a facility;

(87) "Saturated zone (zone of saturation)" means that part of the earth's crust in which all voids are filled with water;

(88) "SDWA" means the Safe Drinking Water Act (Public Law 95-523, as amended by Public Law 95-1900);

(89) "SIC" means Standard Industrial Classification;

(90) "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;

(91) "Spill" means the accidental spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous wastes or materials which, when spilled, become hazardous wastes into or on any land or water;

(92) "State Act" means the Hazardous Waste Management Act, § 20-5E-1, et seq.;

(93) "State waters" or "waters" means any and all water on or beneath the surface of the ground, whether percolating, standing, diffused or flowing, wholly or partially within this State, or bordering this State and within its jurisdiction, and shall include, without limiting the generality of the foregoing, natural or artificial lakes, rivers, streams, creeks, branches, brooks, ponds (except farm ponds, industrial settling basins and ponds and water treatment facilities), impounding reservoirs, springs, wells, watercourses and wetlands;

(94) "Storage" means the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere;

(95) "Storm" means the 10-year, 24-hour rainfall event for a particular location as defined by the National Weather Service in Technical Paper # 40, "Rainfall Frequency Atlas of the United States," May 1961, and subsequent amendments thereto or equivalent region or state rainfall probability information developed therefrom;

(96) "Surface impoundment or impoundment" means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials

(although it may be lined with man-made materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons;

(97) "Tank" means a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials which provide structural support;

(98) "Totally enclosed treatment facility" means a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents release of any hazardous waste or any constituent thereof into the environment during treatment;

(99) "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;

(100) "Transportation" means the movement of hazardous waste by air, rail, highway or water;

(101) "Transporter" means a person engaged in the off-site transportation of hazardous waste by air, rail, highway or water;

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

(103) "Treatment" means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste or so as to render such waste non-hazardous, safer to transport, store or dispose of, or amenable to recovery, amenable for storage or reduced in volume. Such term includes any activity or processing designed to change the physical form or chemical composition of hazardous waste as to render it non-hazardous;

(104) "Triple rinsed" means containers which have been flushed three (3) times, each time using a volume of dilutant at least equal to ten percent (10%) of the container's capacity;

(105) "Unsaturated zone" or "zone of aeration" means the zone between topographic surface and the water table;

(106) "Waste" means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant or air pollution control facility and other discarded material including solid, liquid, semisolid or contained gaseous material resulting from industrial, commercial, mining and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under Section 402 of the Federal Water Pollution Control Act, as amended, or source, special nuclear or byproduct material as defined by the Federal Atomic Energy Act of 1954, as amended;

(107) "Wastewater treatment unit" means a device which:

(i) Is part of a wastewater treatment facility which is subject to regulation under the CWA;

(ii) Receives and treats or stores an influent wastewater which is a hazardous waste as defined in this section, or generates and accumulates, or treats or stores a wastewater treatment sludge that is defined as a hazardous waste; and

(iii) Meets the definition of a tank as defined in this section;

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

(109) "Water table" means the upper surface of the zone of saturation in groundwaters in which the hydrostatic pressure is equal to atmospheric pressure;

(110) "Well" means any shaft or pit dug, drilled, jetted, driven, or bored into the earth, generally of a cylindrical form, and often cased with bricks or tubing to prevent the earth from caving-in, whose depth is greater than the largest surface dimension.

IDENTIFICATION AND LISTING OF HAZARDOUS WASTE

Section 3.00 General.

Section 3.01 Purpose and Scope.

(a) This section identifies those wastes which are subject to regulation as hazardous wastes.

(b) This section identifies only some of the materials which are hazardous wastes for purposes of Sections 5, 12, 13, and 17 of the West Virginia Code, Chapter 20, Article 5E. A material which is not a hazardous waste identified or listed in this section may still be a hazardous waste for purposes of those sections if the Director has reason to believe that the material may be a hazardous waste within the meaning of 20-5E-3(6) of the State Act.

3.01.01 Definitions of Waste.

(a) A waste is any garbage, refuse, sludge or any other waste material which is not excluded under 3.01.03(a).

(b) An "other waste material" is any solid, liquid, semi-solid or contained gaseous material, resulting from industrial, commercial, mining or agricultural operations, or from community activities which:

(1) Is discarded or is being accumulated, stored or physically, chemically or biologically treated prior to being discarded;

(2) Has served its original intended use and sometimes is discarded; and

(3) Is a manufacturing or mining by-product and sometimes is discarded.

(c) A material is "discarded" if it is abandoned (and not used, re-used, reclaimed or recycled) by being:

(1) Disposed of; or

(2) Burned or incinerated, except where the material is being burned as a fuel for the purpose of recovering usable energy; or

(3) Physically, chemically, or biologically treated (other than burned or incinerated) in lieu of or prior to being disposed of.

(d) A material is "disposed of" if it is discharged, deposited, injected, dumped, spilled, leaked or placed into or on any land or water so that such material or any constituent thereof may enter the environment or be emitted into the air or discharged into ground or surface waters.

(e) A "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.

[Note: This definition of waste currently excludes from regulations materials which are burned as fuel for the purpose of recovering usable energy. The Director believes that elimination of this exclusion may, at some future time, be necessary in order to protect the public health and safety and the environment, as required by statute.]

3.01.02 Definition of Hazardous Waste.

(a) A waste as defined in 3.01.01 is a hazardous waste if:

(1) It is not excluded from regulation as a hazardous waste under 3.01.03(b); and

(2) It meets any of the following criteria:

(i) It is listed in 3.04 and has not been excluded from the list in 3.04 pursuant to 40 C.F.R. §§ 260.20 and 260.22.

(ii) It is a mixture of waste and one or more hazardous wastes listed in 3.04 and has not been excluded under 40 C.F.R. §§ 260.20 and 260.22.

(iii) It exhibits any of the characteristics of hazardous waste identified in 3.03.

(b) A waste which is not excluded from regulation under paragraph (a)(1) of this section becomes a hazardous waste when any of the following events occur:

(1) In the case of a waste listed in 3.04 when the waste first meets the listing description set forth in 3.04.

(2) In the case of a mixture of a waste and one or more listed hazardous wastes, when a hazardous waste listed in 3.04 is first added to the waste;

(3) In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in 3.03.

(c) Unless and until it meets the criteria of (d):

(1) A hazardous waste will remain a hazardous waste.

(2) Any waste generated from the treatment, storage or disposal of a hazardous waste, including any sludge, spill residue, ash, emission control dust or leachate (but not including precipitation run-off), is a hazardous waste.

(d) Any waste described in paragraph (c) is not a hazardous waste if it meets the following criteria:

(1) In the case of any waste, it does not exhibit any of the characteristics identified in 3.03.

(2) In the case of a waste which is a listed waste under 3.04, contains a waste listed under 3.04 or is derived from a waste listed in 3.04, it also has been excluded from paragraph (c) under 40 C.F.R. §§ 260.20 and 260.22.

3.01.03 Exclusions.

(c) Materials which are not wastes.

The following materials are not wastes for the purposes of this section:

(1)(i) Domestic sewage; and

(ii) Any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly-owned treatment works for treatment. "Domestic sewage" means untreated sanitary wastes that pass through a sewer system.

(2) Industrial wastewater discharges that are point source discharges subject to regulation under Section 402 of the Clean Water Act, as amended.

[Comment: This exclusion applies only to the actual point source discharge. It does not exclude industrial wastewaters while they are being collected, stored or treated before discharge, nor does it exclude sludges that are generated by industrial wastewater treatment.]

(3) Irrigation return flows.

(4) Source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011, et seq.

(5) Materials subjected to in-situ mining techniques which are not removed from the ground as part of the extraction process.

(b) Wastes which are not hazardous wastes.

The following wastes are not hazardous wastes:

(1) Household waste, including household waste that has been collected, transported, stored, treated, disposed, recovered (e.g., refuse/derived fuel) or reused. "Household waste" means any waste material (including garbage, trash and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels).

(2) Wastes generated by any of the following, and which are returned to the soil as fertilizers:

(i) The growing and harvesting of agricultural crops.

(ii) The raising of animals, including animal manures.

(3) Mining overburden returned to the mine site.

(4) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels.

(5) Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy.

(6)(i) Wastes which fail the test for the characteristic of EP toxicity because chromium is present or are listed in 3.04 due to the presence of chromium which do not fail the test for the characteristic of EP toxicity for any other constituent or are not listed due to the presence of any other constituent, and which do not fail the test for any other characteristic, if it is shown by a waste generator or by waste generators that:

(A) The chromium in the waste is exclusively (or nearly exclusively) trivalent chromium;

(B) The waste is generated from an industrial process which uses trivalent chromium exclusively (or nearly exclusively) and the process does not generate hexavalent chromium; and

(C) The waste is typically and frequently managed in non-oxidizing environments.

(ii) Specific wastes which meet the standard in paragraphs (b)(6)(i), (A), (B), and (C), (so long as they do not fail the test for the characteristic of EP toxicity, and do not fail the test for any other characteristic) are:

(A) Chrome (blue) trimmings generated by the following sub-categories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(B) Chrome (blue) shavings generated by the following sub-categories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(C) Buffing dust generated by the following sub-categories of the leather tanning and finishing industry; hair pulp/ chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue.

(D) Sewer screenings generated by the following sub-categories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(E) Wastewater treatment sludges generated by the following sub-categories of the leather tanning and finishing industry; hair

pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; retan/wet finish; no beamhouse; through-the-blue; and shearling.

(F) Wastewater treatment sludges generated by the following sub-categories of the leather tanning and finishing industry; hair pulp/chrome tan/retan/wet finish; hair save/chrome tan/retan/wet finish; and through-the-blue.

(G) Waste scrap leather from the leather tanning industry, the shoe manufacturing industry, and other leather product manufacturing industries.

(H) Wastewater treatment sludges from the production of TiO_2 pigment using chromium-bearing ores by the chloride process.

(7) Waste from the extraction, beneficiation and processing of ores and minerals (including coal), including phosphate rock and overburden from the mining of uranium ore.

(8) Cement kiln dust waste.

(9) Waste which consists of discarded wood or wood products which fails the test for the characteristic of EP toxicity and which is not a hazardous waste for any other reason if the waste is generated by persons who utilize the arsenical-treated wood and wood products for these materials intended end use.

(c) Hazardous wastes which are exempted from certain regulations. A hazardous waste which is generated in a product or raw material storage tank, a product or raw material transport vehicle or vessel, a product or raw material pipeline, or in a manufacturing process unit or an associated non-waste treatment manufacturing unit is not subject to regulation under Sections 4.00, 6.00, 8.00, 40 C.F.R. Part 265, or Section 11 of these regulations until it exits the unit in which it was generated, unless the unit is a surface impoundment, or unless the hazardous waste remains in the

unit more than ninety (90) days after the unit ceases to be operated for manufacturing, or for storage or transportation of the product or raw materials.

(d) Samples.

(1) Except as provided in paragraph (d)(2) of this section, a sample of waste or a sample of water, soil or air, which is collected for the sole purpose of testing to determine its characteristics or composition, is not subject to any requirements of these regulations when:

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

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

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

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

(v) The sample is being stored in a laboratory after testing but before it is returned to the sample collector; or

(vi) The sample is being stored temporarily in the laboratory after testing for a specific purpose (for example, until conclusion of a court case or enforcement action where further testing of the sample may be necessary).

(2) In order to qualify for the exemption in paragraph (d)(1)(i) and (ii) of this section, a sample collector shipping samples to a laboratory and a laboratory returning samples to a sample collector must:

(i) Comply with U.S. Department of Transportation (DOT), U.S. Postal Service (USPS), or any other applicable shipping requirements; or

(ii) Comply with the following requirements if the sample collector determines that DOT, USPS, or other shipping requirements do not apply to the shipment of the sample:

(A) Assure that the following information accompanies the sample:

(1) The sample collector's name, mailing address, and telephone number;

(2) The laboratory's name, mailing address, and telephone number;

(3) The quantity of the sample;

(4) The date of shipment; and

(5) A description of the sample.

(B) Package the sample so that it does not leak, spill, or vaporize from its packaging.

(3) This exemption does not apply if the laboratory determines that the waste is hazardous but the laboratory is no longer meeting any of the conditions stated in paragraph (d)(1) of this section.

3.01.04 Special Requirements for Hazardous Waste Generated by Small Quantity Generators.

(a) A generator is a small quantity generator in a calendar month if he generates less than 1000 kilograms of hazardous waste in that month.

(b) Except for those wastes identified in paragraphs (e) and (f) of this section, a small quantity generator's hazardous wastes are not subject to regulation under Sections 6.00, 8.00 and 11.00 of these regulations and 40 C.F.R. Part 265, provided the generator complies with the requirements of paragraph (g) of this section.

(c) Hazardous waste that is beneficially used or re-used or legitimately recycled or reclaimed and that is excluded from regulation by Section 3.01.05(a) is not included in the quantity determinations of this section, and is not subject to any requirements of this section if the notification requirements of Section 4.00 are complied with. Hazardous waste that is subject to the special requirements of Section 3.01.05(b) is included in the quantity determinations of this section and is subject to the requirements of this section.

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

(1) His hazardous waste when it is removed from on-site storage; or

(2) Hazardous waste produced by on-site treatment of his hazardous waste.

(e) If a small quantity generator generates acutely hazardous waste in a calendar month in quantities greater than set forth below, all quantities of that acutely hazardous waste are fully subject to these regulations:

(1) A total of one kilogram of commercial chemical products and manufacturing chemical intermediates having the generic names listed in 3.04.04(e), and off-specification commercial chemical products and manufacturing chemical intermediates which, if they met specifications, would have the generic names listed in 3.04.04(e);

(2) A total of 100 kilograms of 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 products or manufacturing chemical intermediates having the generic names listed in 3.04.04(e), 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 commercial chemical products or manufacturing chemical intermediates which, if they met specifications, would have the generic names listed in 3.04.04(e).

(f) A small quantity generator may accumulate hazardous waste on-site. If he accumulates at any time more than a total of 1000 kilograms of his hazardous waste, or his acutely hazardous wastes in quantities greater than those set forth in paragraphs (e)(1) or (e)(2) of this section all of those accumulated wastes for which the accumulation limit was exceeded are fully subject to these regulations. The time period of Section 6.03.05 for accumulation of wastes on-site begins for a small quantity generator when the accumulated wastes exceed the applicable exclusion level.

(g) In order for hazardous waste generated by a small quantity generator to be excluded from full regulation under this section, the generator must:

(1) Comply with Sections 4.00 and 6.01.01 of these regulations;

(2) If he stores his hazardous waste on-site, store it in compliance with the requirements of paragraph (f) of this section;

(3) Establish and maintain on-site a written record specifying the quantity and types of hazardous wastes disposed of, the dates the wastes were transported off-site, and the final disposition of the wastes; and

[Comment: This recordkeeping requirement is only applicable to manufacturing facilities. Non-manufacturing facilities such as schools, service stations, etc. are not required to comply with this subsection.]

(4) Either treat or dispose of his hazardous waste in an on-site facility, or ensure delivery to an off-site storage, treatment or disposal facility, either of which is:

(i) Permitted under 40 C.F.R. Part 122 of the federal Code;

(ii) In interim status under 40 C.F.R. Parts 122 and 265 and 20-5E-10 of the West Virginia Code;

(iii) Permitted by this State under Section 11.00 of these regulations;

(iv) Permitted by this State to manage industrial wastes under the Water Pollution Control Act;

(v) Authorized to manage hazardous waste by a state with a hazardous waste program approved under 40 C.F.R. Part 123;

(vi) A facility which:

(A) Beneficially uses or re-uses, or legitimately recycles or reclaims his waste; or

(B) Treats his waste prior to beneficial use or re-use, or legitimate recycling or reclamation.

(h) Hazardous waste subject to the reduced requirements of this section may be mixed with non-hazardous waste and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity limitations identified in this section, unless the mixture meets any of the characteristics of hazardous wastes identified in Sections 3.03.

(i) If a small quantity generator mixes a waste with a hazardous waste that exceeds a quantity exclusion level of this section, the mixture is subject to full regulation.

3.01.05 Special Requirements for Hazardous Waste Which is Used, Reused, Recycled or Reclaimed.

(a) Except as otherwise provided in paragraph (b) of this section, a hazardous waste which meets any of the following criteria is not subject to the full requirements of these

regulations until such time as the Director promulgates regulations to the contrary:

(1) It is beneficially used or reused or legitimately recycled or reclaimed;

(2) It is being accumulated, stored or physically, chemically or biologically treated prior to beneficial use or reuse or legitimate recycling or reclamation;

(3) It is one of the following materials being used, reused, recycled or reclaimed in the specified manner:

(i) Spent pickle liquor which is reused in wastewater treatment at a facility holding a National Pollutant Discharge Elimination System (NPDES) permit, or which is being accumulated, stored, or physically, chemically, or biologically treated before such reuse.

(b) Except for those wastes listed in paragraph (a)(3), a hazardous waste which is a sludge, or which is listed in 3.04 , or which contains one or more hazardous wastes listed in 3.04 and which is transported or stored prior to being used, reused, recycled, or reclaimed is subject to the following requirements with respect to such transportation or storage:

(1) Notification requirements under Section 4.00;

(2) Requirements for generators under Section 6.00;

(3) Sections 8.01, 8.02, 8.03, 8.04, and 8.05;

(4) Storage facility requirements of Section 11.00;

(5) 40 C.F.R. 265 Subpart A, B, C, D, E, G, H, I, J, and L;

(6) Location standards in Section 12.00 where applicable; and

(7) Transportation regulations promulgated by the Public Service Commission and the Department of Highways and the Director.

3.01.06 Residues of Hazardous Waste in Empty Containers.

(a)(1) Any hazardous waste remaining in either (i) an empty container or (ii) an inner liner removed from an empty container, as defined in paragraph (b) of this section, is not subject to these regulations.

(2) Any hazardous waste in either (i) a container that is not empty or (ii) an inner liner removed from a container that is not empty, as defined in paragraph (b) of this section, is subject to these regulations.

(b)(1) A container or an inner liner removed from a container that has held any hazardous waste, except a waste that is a compressed gas or that is identified in 3.04.04(c) of this section, is empty if:

(i) All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating, and

(ii) No more than 2.5 centimeters (one-inch) of residue remain on the bottom of the container or inner liner.

(2) A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric.

(3) A container or an inner liner removed from a container that has held a hazardous waste identified in 3.04.04(c) of this section is empty if:

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

(ii) The container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or

(iii) In the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container, has been removed.

Section 3.02 Criteria for Identifying the Characteristics of Hazardous Waste and for Listing Hazardous Waste.

3.02.01 Criteria for Identifying the Characteristics of Hazardous Waste.

(a) The Director shall identify and define a characteristic of hazardous waste upon determining that:

(1) A waste that exhibits the characteristic may:

(i) Cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(ii) Pose a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of or otherwise managed; and

(b) The characteristic can be:

(i) Measured by an available standardized test method which is reasonably within the capability of generators of waste or private sector laboratories that are available to serve generators of waste; or

(ii) Reasonably detected by generators of waste through their knowledge of their waste.

3.02.02 Criteria for Listing Hazardous Waste.

(a) The Director may list a waste as being hazardous upon determining that the waste meets one of the following criteria:

(1) It exhibits any of the characteristics of hazardous waste identified in 3.03.

(2) It has been found to be fatal to humans in low doses or, in the absence of data on human toxicity, it has been shown in studies to have an oral LD 50 toxicity (rat) of less than 50 milligrams per kilogram, an inhalation LC 50 toxicity (rat) of less than 2 milligrams per liter, or a dermal LD 50 toxicity (rabbit) of less than 200 milligrams per kilogram or is otherwise capable of causing or significantly contributing to an increase in serious irreversible, or incapacitating reversible, illness. (Waste listed in accordance with these criteria will be designated Acute Hazardous Waste.)

(3) It contains any of the toxic constituents listed in Appendix VIII, unless, after considering any of the following factors, the Director concludes that the waste is not capable of posing a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported or disposed of, or otherwise managed:

(i) The nature of the toxicity presented by the constituent.

(ii) The concentration of the constituent in the waste.

(iii) The potential of the constituent or any toxic degradation product of the constituent to migrate from the waste into the environment under the types of improper management considered in paragraph (a)(3)(vii) of this section.

(iv) The persistence of the constituent or any toxic degradation product of the constituent.

(v) The potential for the constituent or any toxic degradation product of the constituent to degrade into non-harmful constituents and the rate of degradation.

(vi) The degree to which the constituent or any degradation product of the constituent bioaccumulates in ecosystems.

(vii) The plausible types of improper management to which the waste could be subjected.

(viii) The quantities of the waste generated at individual generation sites or on a regional or national basis.

(ix) The nature and severity of the human health and environmental damage that has occurred as a result of the improper management of wastes containing the constituent.

(x) Action taken by other governmental agencies or regulatory programs based on the health or environmental hazard posed by the waste or waste constituent.

(xi) Such other factors as may be appropriate.

Substances will be listed on Appendix VIII, only if they have been shown in scientific studies to have toxic, carcinogenic, mutagenic or teratogenic effects on humans or other life forms. (Wastes listed in accordance with these criteria will be designated Toxic wastes.)

(b) The Director may list classes or types of wastes as hazardous waste if he has reason to believe that individual wastes, within the class or type of waste, typically or frequently are hazardous under the definition of hazardous waste found in 20-5E-3(6) of the State Act.

(c) The Director will use the criteria for listing, specified in this section, to establish the exclusion limits referred to in 3.01.04(c).

Section 3.03 Characteristics of Hazardous Waste.

3.03.01 General.

(a) A waste as defined in 3.01.01 which is not excluded from regulation as a hazardous waste under 3.01.03(b) is a hazardous

waste if it exhibits any of the characteristics identified in this section.

(b) A hazardous waste which is identified by a characteristic in this section, but is not listed as a hazardous waste in 3.04 is assigned the EPA Hazardous Waste Number set forth in the respective characteristic in this section. This number shall be used in complying with the notification requirements of 4.00 of these regulations and certain recordkeeping and reporting requirements under these regulations.

(c) For purposes of Section 3.03, the Director will consider a sample obtained using any of the applicable sampling methods specified in Appendix I to be a representative sample within the meaning of Section 2.00 of these regulations.

3.03.02 Characteristic of Ignitability.

(a) A waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

(1) It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume, and has a flashpoint less than 60°C (140°F), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D-93-79, or a Setaflash Closed Cup Tester, using the test method specified in ASTM standard D-3278-78, or as determined by an equivalent test method approved by the Administrator under the procedures set forth in 40 C.F.R. §§ 260.20 and 260.21.

(2) It is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard.

(3) It is an ignitable compressed gas as defined in 49 C.F.R. Section 173.300 and as determined by the test methods described in that regulation or equivalent test methods approved by the Administrator under 40 C.F.R. §§ 260.20 and 260.21.

(4) It is an oxidizer as defined in 40 C.F.R. § 173.51.

(b) A waste that exhibits the characteristic of ignitability, but is not listed as a hazardous waste by the Administrator, or the Director has the Hazardous Waste Number of D001.

3.03.03 Characteristic of Corrositivity.

(a) A waste exhibits the characteristic of corrosivity if a representative sample of the waste has either of the following properties:

(1) It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using either the test method specified in the "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," or an equivalent test method approved by the Administrator under the procedures set forth in 40 C.F.R. §§ 260.20 and 260.21.

(2) It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F) as determined by the test method specified in NACE (National Association of Corrosion Engineers) Standard TM-01-69 as standardized in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," or an equivalent test method approved by the Administrator under the procedures set forth in 40 C.F.R. §§ 260.20 and 260.21.

(b) A waste that exhibits the characteristics of corrositivity, but is not listed as a hazardous waste by the Administrator, or Director has the Hazardous Waste Number of D002.

3.03.04 Characteristic of Reactivity.

(a) A waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:

(1) It is normally unstable and readily undergoes violent changes without detonating;

(2) It reacts violently with water;

(3) It forms potentially explosive mixtures with water;

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

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

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

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

(8) It is a forbidden explosive as defined in 49 C.F.R. § 173.51, or a Class A explosive as defined in 49 C.F.R. § 173.53 or a Class B explosive as defined in 49 C.F.R. § 173.88.

(b) A waste that exhibits the characteristic of reactivity, but is not listed as a hazardous waste by the Administrator or Director has the Hazardous Waste Number of D003.

3.03.05 Characteristic of EP Toxicity.

(a) A waste exhibits the characteristic of EP toxicity if, using the test methods described in Appendix II or equivalent

methods approved by the Administrator under the procedures set forth in 40 C.F.R. §§ 260.20 and 260.21, the extract from a representative sample of the waste contains any of the contaminants listed in Table I at a concentration equal to or greater than the respective value given in that table. Where the waste contains less than 0.5 percent filterable solids, the waste itself, after filtering, is considered to be the extract for the purposes of this section.

(b) A waste that exhibits the characteristic of EP toxicity, but is not listed as a hazardous waste by the Administrator or Director has the Hazardous Waste Number specified in Table I which corresponds to the toxic contaminant causing it to be hazardous.

TABLE I. - MAXIMUM CONCENTRATION OF CONTAMINANTS FOR CHARACTERISTIC OF EP TOXICITY

EPA Hazardous Waste Number	Contaminant	Maximum Concentration (Milligrams per liter)
D004	Arsenic	5.0
D005	Barium	100.0
D006	Cadmium	1.0
D007	Chromium (VI)	5.0
D008	Lead	5.0
D009	Mercury	0.2
D010	Selenium	1.0
D011	Silver	5.0
D012	Endrin (1,2,3,4,10,10-hexachloro-1 7-epoxy-1,4,4a,5,6,7,8,8a-octa-	

	hydro-1 4-endo, endo-5, 8-dimethano napthalene.	0.02
D013	Lindane (1,2,3,4,5,6-hexachloro-cyclohexane, gamma isomer.	0.4
D014	Methoxychlor (1,1,1-Trichloro-2-2, -bis [p-methoxyphenyl] ethane).	10.0
D015	Toxaphene ($C_{10}H_{10}Cl_8$, Technical chlorinated champhene, 67-69 percent chlorine).	0.5
D016	2,4-D, (2,4-Dichlorophenoxyacetic acid).	10.0
D017	2,4,5-TP Silvex (2,4,5-Trichloro-phenoxypropionic acid).	1.0

Section 3.04 Lists of Hazardous Wastes.

3.04.01 General.

(a) A waste is a hazardous waste if it is listed in this Section unless it has been excluded from this list under 40 C.F.R. 260.20 and 260.22.

(b) The Director will indicate his basis for listing the classes or types of wastes listed in this Section by employing one or more of the following Hazard Codes:

Ignitable Waste	(I)
Corrosive Waste	(C)
Reactive Waste	(R)
EP Toxic Waste	(E)
Acute Hazardous Waste	(H)
Toxic Waste	(T)

Appendix VII identifies the constituent which caused the Director to list the waste as an EP Toxic Waste (E) or Toxic Waste (T) in §§ 3.04.02 and 3.04.03.

(c) Each hazardous waste listed in this Section is assigned an Hazardous Waste Number which precedes the name of the waste. This number must be used in complying with the notification requirements of § 4.00 of these regulations and certain recordkeeping and reporting requirements under § 6.00, 8.00 and § 11.00 of these regulations.

(d) The following hazardous wastes listed in § 3.04.02 or 3.04.03 are subject to the exclusion limits for acutely hazardous wastes established in § 3.01.04: [Reserved]

3.04.02 Hazardous Waste from Non-specific sources.

Hazardous Waste No.	Hazardous Waste	Hazard Code
Generic:		
F001	The following spent halogenated solvents used in degreasing: tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichoroethane, carbon tetrachloride, and chlorinated fluorocarbons; and sludges from	

	the recovery of these solvents in degreasing operations.	(T)
F002.....	The following spent haloengated solvents: tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, orthodichlorobenzene, and trichlorofluoromethane; and the still bottoms from the recovery of these solvents.	(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; and the still bottoms from the recovery of these solvents.	(I)
F004.....	The following spent non-halogenated solvents: cresols and cresylic acid, and nitrobenzene; and the still bottoms from the recovery of these solvents.	(T)
F005.....	The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, and pyridine; and the still bottoms from the recovery of these solvents.	(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 on carbon steel; and (6) chemical etching and milling of aluminum.	(T)

F019.....Wastewater treatment sludges from the chemical conversion coating of aluminum..... (T)

F007.....Spent cyanide plating bath solutions from electroplating operations (except for precious metals electroplating spent cyanide plating bath solutions). (R, T)

F008.....Plating bath sludges from the bottom of plating baths from electroplating operations where cyanides are used in the process (except for precious metals electroplating plating bath sludges). (R, T)

F009.....Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process (except for precious metals electo-plating spent stripping and cleaning bath solutions). (R, T)

F010.....Quenching bath sludge from oil baths from metal heat treating operations where cyanides are used in the process (except for precious metals heat-treating quenching bath sludges). (R, T)

F011.....Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations (except for precious metals heat treating spent cyanide solutions from salt bath pot cleaning). (R, T)

F012.....Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process (except for precious metals heat treating quenching wastewater treatment sludges). (T)

3.04.03 Hazardous Waste from Specific Sources.

Hazardous Waste No.	Hazardous Waste	Hazard Code
Wood Preservation:		
K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol	(T)
Inorganic Pigments:		
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments	(T)
K003	Wastewater treatment sludge from the production of molybdate orange pigments	(T)
K004	Wastewater treatment sludge from the production of zinc yellow pigments	(T)
K005	Wastewater treatment sludge from the production of chrome green pigments	(T)
K006	Wastewater treatment sludge from the production of chrome ioxide 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 ortho-xylene	(T)
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene	(T)
K025	Distillation bottoms from 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 hydrochnorinator reactor in the production of 1,1,1-trichloroethane	(T)
K029	Waste from the product stream stripper in the production 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 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)

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 form 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 diethylphosphorodithioic acid in the production of phorate	(T)
K040	Wastewater treatment sludge from the production of phorate	(T)
K041	Wastewater treatment sludge from the production of toxaphene	(T)
K098	Untreated process wastewater from the production of toxaphene	(T)
K042	Heavy ends or distillation residues from the distillation of 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)

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 from steel finishing operations	(C, 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 organo-arsenic compounds..... (T)

K101.....Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds..... (T)

K102.....Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds..... (T)

Ink Formulation:

K086.....Solvent washes and sludges, caustic washes an 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)

3.04.04 Discarded Commercial Chemical Products, Off-Specification Species, Container Residues, and Spill Residues Thereof.

The following materials or items are hazardous wastes if and when they are discarded or intended to be discarded:

(a) Any commercial chemical product, or manufacturing chemical intermediate having the generic name listed in paragraphs (e) or (f) of this section.

(b) Any off-specification commercial chemical product or manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraphs (e) or (f) of this section.

(c) Any residue remaining in a container or an inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraph (e) of this section, unless the container is empty as defined in § 3.01.06(b)(3) of this chapter.

[Comment: Unless the residue is being beneficially used or reused, or legitimately recycled or reclaimed; or being accumulated, stored, transported or treated prior to such use, re-use, recycling or reclamation, the Director considers the residue to be intended for discard, and thus a hazardous waste. An example of a legitimate re-use of the residue would be where the residue remains in the container and the container is used to hold the same commercial chemical product or manufacturing chemical product or manufacturing chemical intermediate it previously held. An example of the discard of the residue would be where the drum is sent to a drum reconditioner who reconditions the drum but discards the residue.]

(d) Any residue or contaminated soil, water or other debris resulting from the cleanup of a spill into or on any land or water of any commercial chemical product or manufacturing chemical intermediate having the generic name listed in paragraph (e) or (f) of this section, or any residue or contaminated soil, water or other debris resulting from the cleanup of a spill, into or on any land or water, of any off-specification chemical product and manufacturing chemical intermediate which, if it met specifications, would have the generic name listed in paragraph (e) or (f) of this section.

[Comment: The phrase "commercial chemical product or manufacturing chemical intermediate having the generic name listed in . . ." refers to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of the commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as a manufacturing process waste, that contains any of the substance listed in paragraphs (e) or (f). Where a manufacturing process waste is deemed to be a hazardous waste because it contains a substance listed in paragraphs (e) or (f), such waste will be listed in either §§ 3.04.02 or 3.04.03 or will be identified as a hazardous waste by the characteristics set forth in § 3.03 of these regulations.]

(e) The commercial chemical products, manufacturing chemical intermediates or off-specification commercial chemical products or manufacturing chemical intermediates referred to in paragraphs (a) through (d) of this section, are identified as acute hazardous wastes (H) and are subject to be the small quantity exclusion defined in § 3.01.04(a).

[Comment: For the convenience of the regulated community the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), and R (Reactivity). Absence of a letter indicates that the compound only is listed for acute toxicity.]

These wastes and their corresponding Hazardous Waste Numbers are:

Hazardous Waste No.	Substance
P023.....	Acetaldehyde, chloro-
P002.....	Acetamide, N-(aminothioxomethyl)-
P057.....	Acetamide, 2-fluoro-
P058.....	Acetic acid, fluoro-, sodium salt
P066.....	Acetimidic acid, N-[(methylcarbamoyl)oxy] thio-, methyl ester
P001.....	3-(alpha-acetonylbenzyl)-4-hydroxycoumarin and salts
P002.....	1-Acetyl-2-thiourea
P003.....	Acrolein
P070.....	Aldicarb

P004.....	Aldrin
P005.....	Allyl alcohol
P006.....	Aluminum phosphide
P007.....	5-(Aminomethyl)-3-isoxazolol
P008.....	4-aAminopyridine
P009.....	Ammonium picrate (R)
P119.....	Ammonium vanadate
P010.....	Arsenic acid
P012.....	Arsenic (iii) oxide
P011.....	Arsenic (V) oxide
P011.....	Arsenic pentoxide
P012.....	Arsenic trioxide
P038.....	Arsine, diethyl-
P054.....	Aziridine
P013.....	Barium cyanide
P024.....	Benzenamine, 4-chloro-
P077.....	Benzenamine, 4-nitro-
P028.....	Benzene, (chloromethyl)-
P042.....	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-
P014.....	Benzenethiol
P028.....	Benzyl chloride
P015.....	Beryllium dust
P016.....	Bis(chloromethyl) ether
P017.....	Bromoacetone
P018.....	Brucine
P021.....	Calcium cyanide
P123.....	Camphene, octachloro-
P103.....	Carbamimidoselenoic acid
P022.....	Carbon bisulfide
P022.....	Carbon disulfide
P095.....	Carbonyl chloride
P033.....	Chlorine cyanide
P023.....	Chloroacetaldehyde
P024.....	p-Chloroaniline
P026.....	1-(o-Chlorophenyl)thiourea
P027.....	3-Chloropropionitrile
P029.....	Copper cyanides
P030.....	Cyanides (soluble cyanide salts), not elsewhere specified
P031.....	Cyanogen
P033.....	Cyanogen chloride
P036.....	Dichlorophenylarsine
P037.....	Dieldrin
P038.....	Diethylarsine
P039.....	O,O-Diethyl S-[2-(ethylthio)ethyl] phosphorodithioate
P041.....	Diethyl-p-nitrophenyl phosphate
P040.....	O,)-Diethyl O-pyrazinyl phosphorothioate

P043.....	Diisopropyl fluorophosphate
P044.....	Diemthoate
P045.....	3,3-Dimethyl-1-(methylthio)-2-butanone, O-[(methylamino)carbonyl)] oxime
P071.....	O,O-Dimethyl O-p-nitrophenyl phosphorothioate
P082.....	Dimethylnitrosamine
P046.....	alpha, alpha-Dimethylphenethylamine
P047.....	4,6-Dinitro-o-cresol and salts
P034.....	4,6-Dinitro-o-cyclohexylphenol
P048.....	2,4-Dinitrophenol
P020.....	Dinoseb
P085.....	Diphosphoramide, octamethyl-
P039.....	Disulfoton
P049.....	2,4-Dithiobiuret
P109.....	Dithiopyrophosphoric acid, tetraethyl ester
P050.....	Endosulfan
P088.....	Endothall
P051.....	Endrin
P042.....	Epinephrine
P046.....	Ethanamine, 1,1-dimethyl-1-phenyl
P084.....	Ethenamine, N-methyl-N-nitroso-
P101.....	Ethyl cyanide
P054.....	Ethylenimine
P097.....	Famphur
P056.....	Fluorine
P057.....	Fluoroacetamide
P058.....	Fluoroacetic acid, sodium salt
P065.....	Fulminic acid, mercury (ii) salt (R,T)
P059.....	Heptachlor
P051.....	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo, endo-1,4:5,8-dimethanonaphthalene
P037.....	1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo-exo-1,4:5,8-dimethanonapthalene
P060.....	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo, endo-dimethanonapthalene
P004.....	1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo, exo-dimethanonapthalene
P060.....	Hexachlorohexahydro-exo,exo-dimethanonapthalene
P062.....	Hexaethyl tetraphosphate
P116.....	Hydrazinecarbothioamide
P068.....	Hydrazine, methyl-
P063.....	Hydrocyanic acid

P063.....	Hydrogen cyanide
P096.....	Hydrogen phosphide
P064.....	Isocyanic acid, methyl ester
P007.....	3(2H)-Isoxazolone, 5-(aminomethyl)-
P092.....	Mercury, (acetato-O)phenyl
P065.....	Mercury fulminate (R,T)
P016.....	Methane, oxybis(chloro-
P112.....	Methane, tetranitro- (R)
P118.....	Methanethiol, trichloro-
P059.....	4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-
P066.....	Methomyl
P067.....	2-Methylaziridine
P068.....	Methyl hydrazine
P064.....	Methyl isocyanate
P069.....	2-Methyllactonitrile
P071.....	Methyl parathion
P072.....	alpha-Naphthylthiourea
P073.....	Nickel carbonyl
P074.....	Nickel(ii) cyanide
P073.....	Nickel tetracarbonyl
P075.....	Nicotine and salts
P076.....	Nitric oxide
P077.....	p-Nitroaniline
P078.....	Nitrogen dioxide
P076.....	Nitrogen(ii) oxide
P078.....	Nitrogen(IV) oxide
P081.....	Nitroglycerine (R)
P082.....	N-Nitrosodimethylamine
P084.....	N-Nitrosomethylvinylamine
P050.....	5-Norbornene-2,3-dimethanol, 1,4,5,6,7,7-hexachloro, cyclic sulfite
P085.....	Octamethylpyrophosphoramide
P087.....	Osmium oxide
P087.....	Osmium tetroxide
P088.....	7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid
P089.....	Parathion
P034.....	Phenol, 2-cyclohexyl-4,6-dinitro-
P048.....	Phenol, 2,4-dinitro-
P047.....	Phenol, 2,4-dinitro-6-methyl-
P020.....	Phenol, 2,4-dinitro-6-(1-methylpropyl)-
P009.....	Phenol, 2,4,6-dinitro-, ammonium salt (R)
P036.....	Phenyl dichloroarsine
P092.....	Phenylmercuric acetate
P093.....	N-Phenylthiourea
P094.....	Phorate
P095.....	Phosgene
P096.....	Phosphine

P041.....	Phosphoric acid, diethyl p-nitrophenyl ester
P044.....	Phosphorodithioic acid, O,O-dmiethyl S-[2-(methylamino)-2-oxoethyl]ester
P043.....	Phosphorofluoric acid, bis(1-methylethyl)-ester
P094.....	Phosphorothioic acid, O,O-diethyl S-(ethylthio)methyl ester
P089.....	Phosphorothioci acid, O,O-diethyl O-(p-nitrophenyl)ester
P040.....	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
P097.....	Phosphorothioic acid, O,O-dmiethyl O-[p-((dimethylamino)-sulfonyl)phenyllester
P110.....	Plumbane, tetraethyl-
P098.....	Potassium cyanide
P099.....	Potassium silver cyanide
P070.....	Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime
P101.....	Propanenitrile
P027.....	Propanenitrile, 3-chloro-
P069.....	Propanenitrile, 2-hydroxy-2-methyl-
P081.....	1,2,3-Propanetriol, trinitrate- (R)
P017.....	1-Propanone, 1-bromo-
P102.....	Propargyl alcohol
P003.....	2-Propenal
P005.....	2-Propen-1-ol
P067.....	1,2-Propylenimine
P102.....	2-Propyn-1-ol
P008.....	4-Pyridinamine
P075.....	Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts
P111.....	Pyrophosphoric acid, tetraethyl ester
P103.....	Selenourea
P104.....	Silver cyanide
P105.....	Sodium azide
P106.....	Sodium cyanide
P107.....	Strontium sulfide
P108.....	Strychnidin-10-one, and salts
P018.....	Strychnidin-10-one, 2,3-dimethoxy-
P108.....	Strychnine and salts
P115.....	Sulfuric acid, thallium(i) salt
P109.....	Tetraethyldithiopyrophosphate
P110.....	Tetraethyl lead
P111.....	Tetraethylpyrophosphate
P112.....	Tetranitromethane (R)
P062.....	Tetraphosphoric acid, hexaethyl ester
P113.....	Thallic oxide
P113.....	Thallium (iii) oxide

P114.....	Thallium (i) selenite
P115.....	Thallium (i) sulfate
P045.....	Thiofanox
P049.....	Thioimidodicarbonic diamide
P014.....	Thiophenol
P116.....	Thiosemicarbazide
P026.....	Thiourea, (2-chlorophenyl)-
P072.....	Thiourea, 1-naphthalenyl-
P093.....	Thiourea, phenyl-
P123.....	Toxaphene
P118.....	Trichloromethanethiol
P119.....	Vanadic acid, ammonium salt
P120.....	Vanadium pentoxide
P120.....	Vanadium(V) oxide
P001.....	Warfarin
P121.....	Zinc cyanide
P122.....	Zinc phosphide (R,T)

(f) The commercial chemical products, manufacturing chemical intermediates, or off-specification commercial chemical products referred to in paragraphs (a) through (d) of this section, are identified as toxic wastes (T) unless otherwise designated and are subject to the small quantity exclusion defined in § 13.03 of these regulations.

[Comment: For the convenience of the regulated community, the primary hazardous properties of these materials have been indicated by the letters T (Toxicity), R (Reactivity), I (Ignitability) and C (Corrosivity). Absence of a letter indicates that the compound is only listed for toxicity.]

These wastes and their corresponding EPA Hazardous Waste Numbers are:

U001.....	Acetaldehyde (i)
U034.....	Acetaldehyde, trichloro-
U187.....	Acetamide, N-(4-ethoxyphenyl)-
U005.....	Acetamide, N-9-H-fluoren-2-yl-
U112.....	Acetic acid, ethyl ester (i)
U144.....	Acetic acid, lead salt
U214.....	Acetic acid, thallium(i) salt
U002.....	Acetone(i)
U003.....	Acetonitrile (I,T)
U004.....	Acetophenone
U005.....	2-Acetylaminofluorene
U006.....	Acetyl chloride (C,R,T)
U007.....	Acrylamide
U008.....	Acrylic acid (i)
U009.....	Acrylonitrile

U150.....	Alanine, 3-[p-bis(2-chloroethyl)amino] phenyl-, L-
U011.....	Amitrole
U012.....	Aniline (I,T)
U014.....	Auramine
U015.....	Azaserine
U010.....	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-,
U157.....	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-
U016.....	Benz[c]acridine
U016.....	3,4-Benzacridine
U017.....	Benzal chloride
U018.....	Benz[a]anthracene
U018.....	1,2-Benzanthracene
U094.....	1,2-Benzanthracene, 7,12-dimethyl-
U012.....	Benzenamine (I,T)
U014.....	Benzenamine, 4,4'-carbonimidoylbis(N,N-dimethyl-
U049.....	Benzenamine, 4-chloro-2-methyl
U093.....	Benzenamine, N,N'-dimethyl-4-phenylazo-
U158.....	Benzenamine, 4,4'-methylenebis(2-chloro-
U222.....	Benzenamine, 2-methyl-, hydrochloride
U181.....	Benzenamine, 2-methyl-5-nitro
U019.....	Benzene (I,T)
U038.....	Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy, ethyl ester
U030.....	Benzene, 1-bromo-4-phenoxy-
U037.....	Benzene, chloro-
U190.....	1,2-Benzenedicarboxylic acid anhydride
U028.....	1,2-Benzenedicarboxylic acid, [bis(2-ethyl-hexyl)] ester
U069.....	1,2-Benzenedicarboxylic acid, dibutyl ester
U088.....	1,2-Benzenedicarboxylic acid, diethyl ester
U102.....	1,2-Benzenedicarboxylic acid, dimethyl ester
U107.....	1,2-Benzenedicarboxylic acid, di-n-octyl ester
U070.....	Benzene, 1,2-dichloro-
U071.....	Benzene, 1,3-dichloro-
U072.....	Benzene, 1,4-dichloro-
U017.....	Benzene, (dichloromethyl)-
U223.....	Benzene, 1,3-disocyanatomethyl- (R,T)
U239.....	Benzene, dimethyl-(I,T)
U201.....	1,3-Benesenediol

U127.....	Benzene, hexachloro-
U056.....	Benzene, hexahydro- (I)
U188.....	Benzene, hydroxy-
U220.....	Benzene, methyl-
U105.....	Benzene, 1-methyl-1-2-4, dinitro-
U106.....	Benzene, 1-methyl-2,6-dinitro-
U203.....	Benzene, 1,2-methylenedioxy-4-allyl-
U141.....	Benzene, 1,2-methylenedioxy-4-prophenyl-
U090.....	Benzene, 1,2-methylenedioxy-4-propyl-
U055.....	Benzene, (1-methylethyl)- (I)
U169.....	Benzene, nitro- (I,T)
U183.....	Benzene, pentachloro-
U185.....	Benzene, pentachloro-nitro-
U020.....	Benzenesulfonic acid chloride (C,R)
U020.....	Benzenesulfonyl chloride (C,R)
U207.....	Benzene, 1,2,4,5-tetrachloro-
U023.....	Benzene, (trichloromethyl)-(C,R,T)
U234.....	Benzene, 1,3,5-trinitro- (R,T)
U021.....	Benzidine
U202.....	1,2-Benzisothiazolin-3-one, 1,1-dioxide
U120.....	Benzo[j,k]fluorene
U022.....	Benzo[a]pyrene
U022.....	3,4-Benzopyrene
U197.....	p-Benzoquinone
U023.....	Benzotrichloride (C,R,T)
U050.....	1,2-Benzphenanthrene
U085.....	2,2'-Bioxirane (I,T)
U021.....	(1,1'-Biphenyl)-4,4'-diamine
U073.....	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dichloro-
U091.....	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethoxy-
U095.....	(1,1'-Biphenyl)-4,4'-diamine, 3,3'-dimethyl-
U024.....	Bis(2-chloroethoxy) methane
U027.....	Bis(2-chloroisopropyl) ether
U244.....	Bis(dimethylthiocarbamoyl) disulfide
U028.....	Bis(2-ethylexyl) phthalate
U246.....	Bromine cyanide
U225.....	Bromoform
U030.....	4-Bromophenyl phenyl ether
U128.....	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-
U172.....	1-Butanamine, N-butyl-N-nitroso-
U035.....	Butanoic acid, 4-[Bis(2-chloroethyl)amino] benzene-
U031.....	1-Butanol (I)
U159.....	2-Butanone (I,T)
U160.....	2-Butanone peroxide (R,T)
U053.....	2-Butenal

U074.....	2-Butene, 1,4-dichloro- (I,T)
U031.....	n-Butyl alcohol (I)
U136.....	Cacodylic acid
U032.....	Calcium chromate
U238.....	Carbamic acid, ethyl ester
U178.....	Carbamic acid, methylnitroso-, ethyl ester
U176.....	Carbamide, N-ethyl-N-nitroso-
U177.....	Carbamide, N-methyl-N-nitroso-
U219.....	Carbamide, thio-
U097.....	Carbamoyl chloride, dimethyl-
U215.....	Carbonic acid, dithallium (I) salt
U156.....	Carbonochloride acid, methyl ester (I,T)
U033.....	Carbon oxyfluoride (R,T)
U211.....	Carbon tetrachloride
U033.....	Carbonyl fluoride (R,T)
U034.....	Chloral
U035.....	Chlorambucil
U036.....	Chlordane, technical
U026.....	Chlornaphazine
U037.....	Chlorobenzene
U039.....	4-Chloro-m-cresol
U041.....	1-Chloro-2,3-epoxypropane
U042.....	2-Chloroethyl vinyl ether
U044.....	Chloroform
U046.....	Chloromethyl methyl ether
U047.....	beta-Chloronaphthalene
U048.....	o-Chlorophenol
U049.....	4-Chloro-o-toluidine, hydrochloride
U032.....	Chromic acid, calcium salt
U050.....	Chrysene
U051.....	Creosote
U052.....	Cresols
U052.....	Cresylic acid
U053.....	Crotonaldehyde
U055.....	Cumene (I)
U246.....	Cyanogen bromide
U197.....	1,4-Cyclohexadienedione
U056.....	Cyclohexane (I)
U057.....	Cyclohexanone (I)
U130.....	1,3-Cyclopentadiene, 1,2,3,4,5,5-hexa-chloro-
U058.....	Cyclophosphamide
U240.....	2,44-D, salts and esters
U059.....	Daunomycin
U060.....	DDD
U061.....	DDT
U142.....	Decachlorooctahydro-1,3,4-metheno-2H-cyclobuta[c,d]-pentalen-2-one
U062.....	Diallate

U133.....	Diamine (R,T)
U221.....	Diaminotoluene
U063.....	Dibenz[a,h]anthracene
U063.....	1,2:5,6-Dibenzanthracene
U064.....	1,2,7,8-Dibenzopyrene
U064.....	Dibenz[a,i]pyrene
U066.....	1,2-Dibromo-3-chloropropane
U069.....	Dibutyl phthalate
U062.....	S-(2,3-Dichloroallyl) diisopropylthiocarbamate
U070.....	o-Dichlorobenzene
U071.....	m-Dichlorobenzene
U072.....	p-Dichlorobenzene
U073.....	3,3'-Dichlorobenzidine
U074.....	1,4-Dichloro-2-butene (I,T)
U075.....	Dichlorodifluoromethane
U192.....	3,5-Dichloro-N-(1,1-dimethyl-1-propynyl) benzamide
U060.....	Dichloro diphenyl dichloroethane
U061.....	Dichloro diphenyl trichloroethane
U078.....	1,1-Dichloroethylene
U079.....	1,2-Dichloroethylene
U025.....	Dichloroethyl ether
U081.....	2,4-Dichlorophenol
U082.....	2,6-Dichlorophenol
U240.....	2,4-Dichlorophenoxyacetic acid, salts and esters
U083.....	1,2-Dichloropropane
U084.....	1,3-Dichloropropane
U085.....	1,2:3,4-Diepoxybutane (I,T)
U108.....	1,4-Diethylene dioxide
U086.....	N,N-Diethylhydrazine
U087.....	O,O-Diethyl-S-methyl-dithiophosphate
U088.....	Diethyl phthalate
U089.....	Diethylstilbestrol
U148.....	1,2-Dihydro-3,6-pyradizinedione
U090.....	Dihydrosafrole
U091.....	3,3'-Dimethoxybenzidine
U092.....	Dimethylamine (I)
U093.....	Dimethylaminoazobenzene
U094.....	7,12-Dimethylbenz[a]anthracene
U095.....	3,3'-Dimethylbenzidine
U096.....	alpha, alpha-Dimethylbenzyhydroperoxide (R)
U097.....	Dimethylcarbamoyl chloride
U098.....	1,1-Dimethylhydrazine
U099.....	1,2-Dimethylhydrazine
U101.....	2,4-Dimethylphenol
U102.....	Dimethyl phthalate

U103..... Dimethyl sulfate
U105..... 2,4-Dinitrotoluene
U106..... 2,6-Dinitrotoluene
U107..... Di-n-octyl phthalate
U108..... 1,4-Dioxane
U109..... 1,2-Diphenylhydrazine
U110..... Dipropylamine (I)
U111..... Di-N-propylnitrosamine
U001..... Ethanal (I)
U174..... Ethanamine, N-ethyl-N-nitroso-
U067..... Ethane, 1,2-dibromo-
U076..... Ethane, 1,1-dichloro-
U077..... Ethane, 1,2-dichloro-
U114..... 1,2-Ethanediylbiscarbamodithioic acid
U131..... Ethane, 1,1,1,2,2,2-hexachloro-
U024..... Ethane, 1,1'-[methylenebix(oxy)] bis[2-chloro-
U003..... Ethanenitrile (I,T)
U117..... Ethane,1,1'-oxybis- (I)
U025..... EThane, 1,1'-oxybis[2-chloro-
U184..... Ethane, pentachloro-
U208..... Ethane, 1,1,1,2-tetrachloro-
U209..... Ethane, 1,1,2,2-tetrachloro-
U218..... Ethanethioamide
U227..... Ethane, 1,1,2-trichloro-
U247..... Ethane,1,1,1,-trichloro-2,2-bis(p-methoxyphenyl)
U043..... Ethene, chloro-
U042..... Ethene, 1-chloroethoxy-
U078..... Ethene, 1,1-dichloro-
U079..... Ethene, trans-1,2-dichloro-
U210..... Ethene, 1,1,2,2-tetrachloro-
U173..... Ethanol, 2,2'-(nitrosoimino)bis-
U004..... Ethanone, 1-phenyl-
U006..... Ethanoyl chloride (C,R,T)
U112..... Ethyl acetate (I)
U113..... Ethyl acrylate (I)
U238..... Ethlyl carbamate (urethan)
U038..... Ethyl 4,4'-dichlorobenzilate
U114..... Ethylenebis(dithiocarbamic acid)
U067..... Etylene dibromide
U077..... Ethylene dichloride
U115..... Ethlene oxide (I,T)
U116..... Ethylene thiourea
U117..... Ethyl ether (I)
U076..... Ethylidene dichloride
U118..... Ethylmethacrylate
U119..... Ethyl methanesulfonate
U139..... Ferric dextran

U120.....	Fluoranthene
U122.....	Formaldehyde
U123.....	Formic acid (C,T)
U124.....	Furan (I)
U125.....	2-Furancarboxaldehyde (I)
U147.....	2,5-Furandione
U213.....	Furn, tetrahydro- (I)
U125.....	Furfural (I)
U124.....	Furfuran (I)
U206.....	D-Glucopyranose, 2-deoxy-2(3-methyl-3-nitrosoureido)-
U126.....	Glycidylaldehyde
U163.....	Guanidine, N-nitroso-N-methyl-N'nitro-
U127.....	Hexachlorobenzene
U128.....	Hexachlorobutadiene
U129.....	Hexachlorocyclohexane (gamma isomer)
U130.....	Hexachlorocyclopentadiene
U131.....	Hexachloroethane
U132.....	Hexachlorophene
U243.....	Hexachloropropene
U133.....	Hydrazine (R,T)
U086.....	Hydrazine, 1,2-diethyl-
U098.....	Hydrazine, 1,1-dimethyl-
U099.....	Hydrazine, 1,2-dimethyl-
U109.....	Hydrazine, 1,2-diphenyl-
U134.....	Hydrofluoric acid (C,T)
U134.....	Hydrogen flouride (C,T)
U135.....	Hydrogen sulfide
U096.....	Hydroperoxide, 1-methyl-1-phenylethyl-(R)
U136.....	Hydroxydimethylarsine oxide
U116.....	2-Imidazolidinethione
U137.....	Indeno[1,2,3-cd]pyrene
U139.....	Iron dextran
U140.....	Isobutyl alcohol (I,T)
U141.....	Isosafrole
U142.....	Kepone
U143.....	Lasiocarpine
U144.....	Lead acetate
U145.....	Lead phosphate
U146.....	Lead subacetate
U129.....	Lindane
U147.....	Maleic anhydride
U148.....	Maleic hydrazide
U149.....	Malononitrile
U150.....	Melphalan
U151.....	Mercury
U152.....	Methacrylonitrile (I,T)
U092.....	Methanamine, N-methyl- (I)
U029.....	Methane, bromo-

U045.....	Methane, chloro- (I,T)
U046.....	Methane, chloromethoxy-
U068.....	Methane, dibromo-
U080.....	Methane, dichloro-
U075.....	Methane, dichlorodifluoro-
U138.....	Methane, iodo-
U119.....	Methane, sulfonic acid, ethyl ester
U211.....	Methane, tetrachloro-
U121.....	Methane, trichlorofluoro-
U153.....	Methanethiol (I,T)
U225.....	Methane, tribromo-
U044.....	Methane, trichloro-
U121.....	Methane, trichlorofluoro-
U123.....	Methanoic acid (C,T)
U036.....	4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-3a,4,7,7a-tetrahydro-
U154.....	Methanol (I)
U155.....	Methapyriline
U247.....	Methoxychlor
U154.....	Methyl alcohol (I)
U029.....	Methyl bromide
U186.....	1-Methylbutadiene (I)
U045.....	Methyl chloride (I,T)
U156.....	Methyl chlorocarbonate (I,T)
U226.....	Methylchloroform
U157.....	3-Methylcholanthrene
U158.....	4,4'-Methylenebis(2-chloroaniline)
U132.....	2,2'-Methylenebis (3,4,6-trichlorophenol)
U068.....	Methylene bromide
U080.....	Methylene chloride
U122.....	Methylene oxide
U159.....	Methyl ethyl ketone (I,T)
U160.....	Methyl ethyl ketone peroxide (R,T)
U138.....	Methyl iodide
U161.....	Methyl isobutyl ketone (I)
U162.....	Methyl methacrylate (I,T)
U163.....	N-Methyl-N'-nitro-N-nitrosoguanidine
U161.....	4-Methyl-2-pentanone (I)
U164.....	Methylthiouracil
U010.....	Mitomycin C
U059.....	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-
U165.....	Naphthalene
U047.....	Naphthalene, 2-chloro-
U166.....	1,4-Naphthalenedione
U236.....	2,7-Naphthalenedisulfonic acid, 3,3'-[3,3'-dimethyl-(1,1'-biphenyl)-

	4,4'diyl)]-bis-(azo)bis(5-amino-4-hydroxy)-,tetrasodium salt
U166.....	1,4,Naphthaquinone
U167.....	1-Naphthylamine
U168.....	2-Naphthylamine
U167.....	alpha-Naphthylamine
U168.....	beta-Naphthylamine
U026.....	2-Naphthylamine, N,N'-bis(2-chloro-methyl)-
U169.....	Nitrobenzene (I,T)
U170.....	p-Nitrophenol
U171.....	2-Nitropropane (I)
U172.....	N-Nitrosodi-n-butylamine
U173.....	N-Nitrosodiethanolamine
U174.....	N-Nitrosodiethylamine
U111.....	N-Nitroso-N-propylamine
U176.....	N-Nitroso-N-ethylurea
U177.....	N-Nitroso-N-methylurethane
U179.....	N-Nitrosopiperidine
U180.....	N-Nitrosopyrrolidine
U181.....	5-Nitro-o-toluidine
U193.....	1,2-Oxathiolane, 2,2-dioxide
U058.....	2H-1,3-2-Oxazaphosphorine, 2-[bis(2-chloro- ethyl)amino]tetrahydro-, oxide 2-
U115.....	Oxirane (I,T)
U041.....	Oxirane, 2-(chloromethyl)-
U182.....	Peraldehyde
U183.....	Pentachlorobenzene
U184.....	Pentachloroethane
U185.....	Pentachloronitrobenzene
U242.....	Pentachlorophenol
U186.....	1,3-Pentadiene (I)
U187.....	Phenacetin
U188.....	Phenol
U048.....	Phenol, 2-chloro-
U039.....	Phenol, 4-chloro-3-methyl-
U081.....	Phenol, 2,4-dichloro-
U082.....	Phenol, 2,6-dichloro-
U101.....	Phenol, 2,4-dimethyl-
U170.....	Phenol, 4-nitro-
U242.....	Phenol, pentachloro-
U212.....	Phenol, 2,3,4,6-tetrachloro-
U230.....	Phenol, 2,4,5-trichloro-
U231.....	Phenol, 2,4,6-trichloro-
U137.....	1,10-(1,2-phenylene)pyrene
U145.....	Phosphoric acid, Lead salt
U087.....	Phosphorodithioic acid,)-)-diethyl-, S-methylester
U189.....	Phosphorous sulfide (R)

U190.....	Phthalic anhydride
U191.....	2-Picoline
U192.....	Pronamide
U194.....	1-Propanamine (I,T)
U110.....	1-Propanamine, N-propyl-(I)
U066.....	Propane, 1,2-dibromo-3-chloro-
U149.....	Propanedinitrile
U171.....	Propane, 2-nitro- (I)
U027.....	Propane, 2,2'oxybis [2-chloro-
U193.....	1,3-Propane sultone
U235.....	1-Propanol, 2,3-dibromo-, phosphate (3:1)
U126.....	1-Propanol, 2,3-epoxy-
U140.....	1-Propanol, 2-methyl- (I,T)
U002.....	2-Propanone (I)
U007.....	2-Propenamide
U084.....	Propene, 1,3-dichloro-
U243.....	1-Propene, 1,1,2,3,3,3-hexachloro-
U009.....	2-Propenenitrile
U152.....	2-Propenenitrile, 2-methyl- (I,T)
U008.....	2-Propenoic acid (I)
U113.....	2-Propenoic acid, ethyl ester (I)
U118.....	2-Propenoic acid, 2-methyl-, ethyl ester
U162.....	2-Propenoic acid, 2-methyl-, methyl ester (I,T)
U233.....	Propionic acid, 2-(2,4,5-trichloro phenoxy)-
U194.....	n-Propylamine (I,T)
U083.....	Propylene dichloride
U196.....	Pyridine
U155.....	Pyridine, 2-[(2-dimethylamino)-2-thenylamino]-
U179.....	Pyridine, hexahydro-N-nitroso-
U191.....	Pyridine, 2-methyl-
U164.....	4(1H)-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-
U180.....	Pyrrole, tetrahydro-N-nitroso-
U200.....	Reserpine
U201.....	Resorcinol
U202.....	Saccharin and salts
U203.....	Safrole
U204.....	Selenious acid
U204.....	Selenium dioxide
U205.....	Selenium disulfide (R,T)
U015.....	L-Serine, diazoacetate (ester)
U233.....	Silvex
U089.....	4,4'-Stilbenediol, alpha,alpha'-diethyl-
U206.....	Streptozotocin
U135.....	Sulfur hydride
U103.....	Sulfuric acid, dimethyl ester

U189.....	Sulfur phosphide (R)
U205.....	Sulfur selenide (R,T)
U232.....	2,4,5-T
U207.....	1,2,4,5-Tetrachlorobenzene
U208.....	1,1,1,2-Tetrachloroethane
U209.....	1,1,2,2-Tetrachloroethane
U210.....	Tetrachloroethylene
U212.....	2,3,4,6-Tetrachlorophenol
U213.....	Tetrahydrofuran (I)
U214.....	Thallium (I) acetate
U215.....	Thallium (I) carbonate
U216.....	Thallium (I) chloride
U217.....	Thallium (I) nitrate
U218.....	Thioacetamide
U153.....	Thiomethanol (I,T)
U219.....	Thiourea
U244.....	Thiram
U220.....	Toluene
U221.....	Toluenediamine
U223.....	Toluene diisocyanate (R,T)
U222.....	O-Toluidine hydrochloride
U011.....	1H-1,2,4-Triazol-3-amine
U226.....	1,1-Trichloroethane
U227.....	1,1,2-Trichloroethane
U228.....	Trichloroethene
U228.....	Trichloroethylene
U121.....	Trichloromonofluoromethane
U230.....	2,4,5-Trichlorophenol
U231.....	2,4,6-Trichlorophenol
U232.....	2,4,5-Trichlorophenoxyacetic acid
U234.....	sym-Trinitrobenzene (R,T)
U182.....	1,3,5-Trioxane, 2,4,5-trimethyl-
U235.....	Tris(2,3-dibromopropyl) phosphate
U236.....	Trypan blue
U237.....	Uracil, 5[bis(2-chloromethyl)amino]-
U237.....	Uracil mustard
U043.....	Vinyl chloride
U239.....	Xylene (I)
U200.....	Yohimban-16-carboxylic acid, 11,17-dimethody-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester,

APPENDIX I - REPRESENTATIVE SAMPLING METHODS

The methods and equipment used for sampling waste materials will vary with the form and consistency of the waste materials to be sampled. Samples collected using the sampling protocols listed below, for sampling waste with properties similar to the indicated materials, will be considered by the Agency to be representative of the waste.

Extremely viscous liquid - ASTM Standard D140-70 Crushed or powdered material--ASTM Standard D346-75 Soil or rock-like material--ASTM Standard D420-69 Soil-like material--ASTM Standard D1452-65.

Fly Ash-like material--ASTM Standard D2234-76 [ASTM Standards are available from ASTM, 1916 Race St., Philadelphia, PA 19103].

Containerized liquid wastes--"COLIWASA" described in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods,"[1] 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."[1]

This manual also contains additional information on application of these protocols.

APPENDIX II - EP TOXICITY TEST PROCEDURE

A. Extraction Procedure (EP)

1. A representative sample of the waste to be tested (minimum size 100 grams) should be obtained using the methods specified in Appendix I or any other methods capable of yielding a representative sample within the meaning of Part 260. [For

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[1]These methods are also described in "Samplers and Sampling Procedures for Hazardous Waste Streams," EPA 600/2-80-018, January 1980.

detailed guidance on conducting the various aspects of the EP see, "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," SW-846, U.S. Environmental Protection Agency Office of Solid Waste, Washington, D.C. 20460.[2]

2. The sample should be separated into its component liquid and solid phases using the method described in "Separation Procedure" below. If the solid residue[3] obtained using this method totals less than 0.5% of the original weight of the waste, the residue can be discarded and the operator should treat the liquid phase as the extract and proceed immediately to Step 8.

3. The solid material obtained from the Separation Procedure should be evaluated for its particle size. If the solid material has a surface area per gram of material equal to, or greater than, 3.1 cm^2 or passes through a 9.5 mm (0.375 inch) standard sieve, the operator should proceed to Step 4. If the surface area is smaller or the particle size larger than specified above, the solid material should be prepared for extraction by crushing, cutting or grinding the material so that it passes through a 9.5 mm (0.375 inch) sieve or, if the material is in a single piece, by subjecting the material to the "Structural Integrity Procedure" described below.

4. The solid material obtained in Step 3 should be weighed and placed in an extractor with 16 times its weight of deionized water. Do not allow the material to dry prior to weighing. For purposes of this test, an acceptable extractor is one which will impart sufficient agitation to the mixture to not only prevent stratification of the sample and extration fluid but also insure that all sample surfaces are continuously brought into contact with well mixed extraction fluid.

5. After the solid material and deionized water are placed in the extractor, the operator should begin agitation and measure the pH of the solution in the extractor. If the pH is greater than

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[2]Copies may be obtained from Solid Waste Information, U.S. Environmental Protection Agency, 26 W. St. Clair Street, Cincinnati, Ohio 45268.

[3]The percent solids is determined by drying the filter pad at 80°C until it reaches the constant weight and then calculating the percent solids using the following equation:

(weight of pad + solid)
- (tare weight of pad)
x 100 = % solids

initial weight of sample

5.0, the pH of the solution should be decreased to 5.0 ± 0.2 by adding 0.5 N acetic acid. If the pH is equal to or less than 5.0, no acetic acid should be monitored, as described below, during the course of the extraction and if the pH rises above 5.2, 0.5N acetic acid should be added to bring the pH down to 5.0 ± 0.2. However, in no event shall the aggregate amount of acid added to the solution exceed 4 ml of acid per gram of solid. The mixture should be agitated for 24 hours and maintained at 20°-40°C (68°-104°F) during this time. It is recommended that the operator monitor and adjust the pH during the course of the extraction with a device such as the Type 45-A pH Controller manufactured by Chemtrix, Inc., Hillsboro, Oregon 97123 or its equivalent, in conjunction with a metering pump and reservoir of 0.5N acetic acid. If such a system is not available, the following manual procedure shall be employed:

(a) A pH meter should be calibrated in accordance with the manufacturer's specifications.

(b) The pH of the solution should be checked and, if necessary, 0.5N acetic acid should be manually added to the extractor until the pH reaches 5.0 ± 0.2. The pH of the solution should be adjusted at 15, 30 and 60 minute intervals, moving to the next longer interval if the pH does not have to be adjusted more than 0.5N pH units.

(c) The adjustment procedure should be continued for at least 6 hours.

(d) If at the end of the 24-hour extraction period, the pH of the solution is not below 5.2 and the maximum amount of acid (4 ml per gram of solids) has not been added, the pH should be adjusted 5.0 ± 0.2 and the extraction continued for an additional four hours, during which the pH should be adjusted at one hour intervals.

6. At the end of the 24 hour extraction period, deionized water should be added to the extractor in an amount determined by the following equation:

V = (20)(W)-16(W)-A
V = ml deionized water to be added
W = weight in grams of solid charged to extractor
A = ml of 0.5N acetic acid added during extraction

7. The material in the extractor should beseparated into its component liquid and solid phases as described under "Separation Procedure."

8. The liquids resulting from Steps 2 and 7 should be combined. This combined liquid (or the waste itself if it has less than 1/2 percent solids, as noted in Step 2) is the extract and should be analyzed for the presence of any of the contaminants

specified in Table I of § 3.04.02 using the Analytical Procedures designated below.

Separation Procedure

Equipment: A filter holder, designed for filtration media having a nominal pore size of 0.45 micrometers and capable of applying a 5.3 kg/cm² (75 psi) hydrostatic pressure to the solution being filtered shall be used. For mixtures containing nonabsorptive solids, where separation can be affected without imposing a 5.3 kg/cm² pressure differential, vacuum filters employing a 0.45 micrometers filter media can be used. (For further guidance on filtration equipment or procedures see "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.")

Procedure[4]

(i) Following manufacturer's directions, the filter unit should be assembled with a filter bed consisting of a 0.45 micrometer filter membrane. For difficult or slow to filter mixtures a prefilter bed consisting of the following prefilters in increasing pore size (0.65 micrometer membrane, fine glass fiber prefilter, and coarse glass fiber prefilter) can be used.

(ii) The waste should be poured into the filtration unit.

(iii) The reservoir should be slowly pressurized until liquid begins to flow from the filtrate outlet at which point the pressure in the filter should be immediately lowered to 10-15 psig. Filtration should be continued until liquid flow ceases.

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[4]This procedure is intended to result in separation of the "free" liquid portion of the waste from any solid matter having a particle size 0.45um. If the sample will not filter, various other separation techniques can be used to aid in the filtration. As described above, pressure filtration is employed to speed up the filtration process. This does not alter the nature of the separation. If liquid does not separate during filtration, the waste can be centrifuged. If separation occurs during centrifugation the liquid portion (centrifugate) is filtered through the 0.45um filter prior to becoming mixed with the liquid portion of the waste obtained from the initial filtration. Any material that will not pass through the filter after centrifugation is considered a solid and is extracted.

(iv) The pressure should be increased stepwise in 10 psi increments to 75 psig and filtration continued until flow ceases or the pressurizing gas begins to exit from the filtrate outlet.

(v) The filter unit should be depressurized, the solid material removed and weighed and then transferred to the extraction apparatus, or, in the case of final filtration prior to analysis, discarded. Do not allow the material retained on the filter pad to dry prior to weighing.

(vi) The liquid phase should be stored at 4°C for subsequent use in Step 8.

B. Structural Integrity Procedure

Equipment: A Structural Integrity Tester having 3.18 cm (1.25 in.) diameter hammer weighing 0.33 kg (0.73 lbs.) and having a free fall of 15.24 cm (6 in.) shall be used. This device is available from Associated Design and Manufacturing Company, Alexandria, VA., 22314, as Part No. 125, or it may be fabricated to meet the specifications shown in Figure 1.

Procedure

1. The sample holder should be filled with the material to be tested. If the sample of waste is a large monolithic block, a portion should be cut from the block having the dimensions of a 3.3 cm (1.3 in.) diameter x 7.1 cm (2.8 in.) cylinder. For a fixated waste, samples may be case in the form of a 3.3 cm (1.3 in.) diameter x 7.1 cm (2.8 in.) cylinder for purposes of conducting this test. In such cases, the waste may be allowed to cure for 30 days prior to further testing.

2. The sample holder should be placed into the Structural Integrity Tester, then the hammer should be raised to its maximum height and dropped. This should be repeated fifteen times.

3. The material should be removed from the sample holder, weighed, and transferred to the extraction apparatus for extraction.

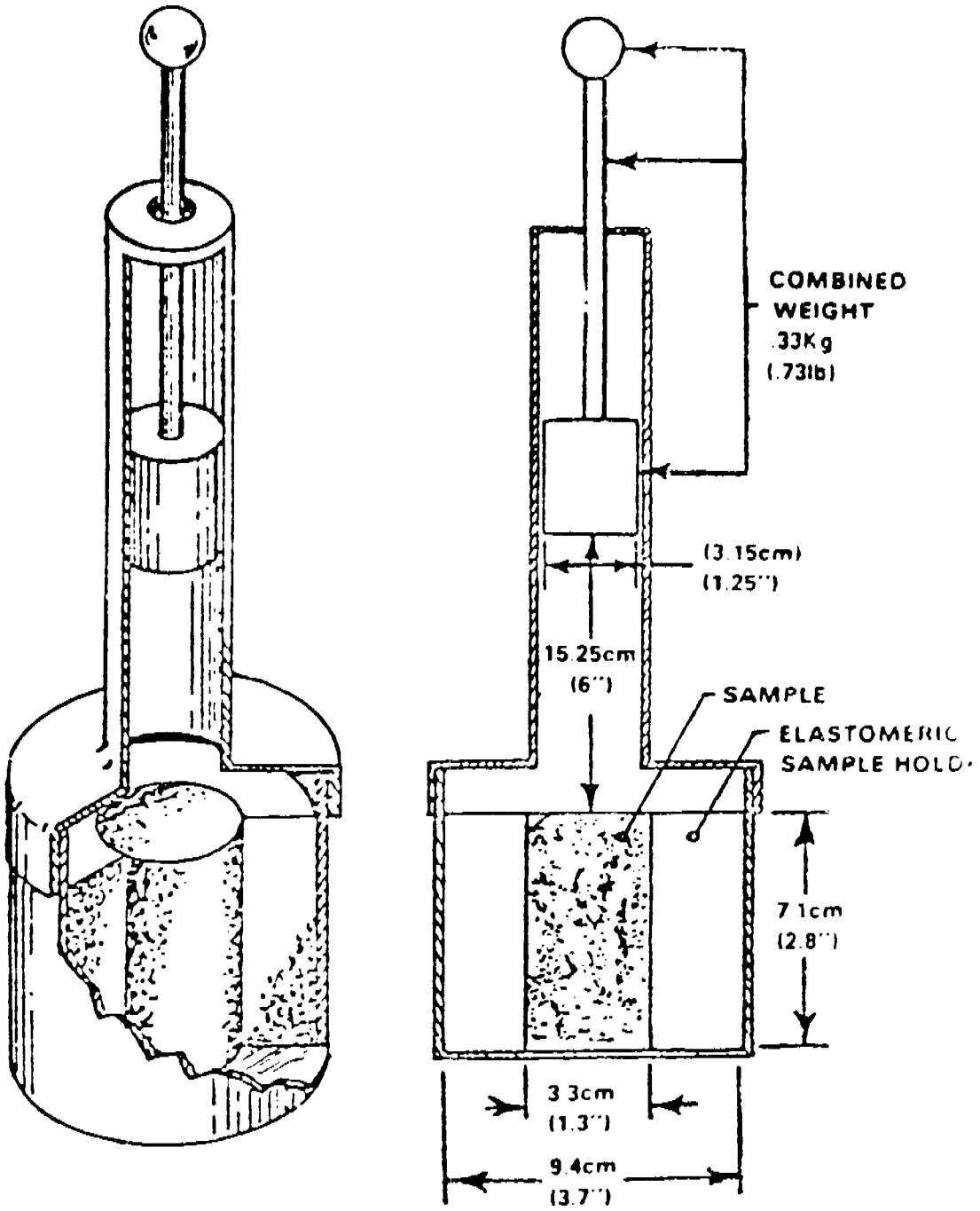
Analytical Procedures for Analyzing
Extract Contaminants

The test methods for analyzing the extract are as follows:

(1) For arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, endrin, lindane, methoxychlor, toxaphene, 2,4-D[2,4-dichlorophenoxyacetic acid] or 2,4,5-TP [2,4,5-trichlorophenoxypropionic acid]: "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," [SW-846], U.S. Environmental Protection Agency, Office of Solid Waste, Washington, D.C. 20460.

(2) [Reserved].

For all analyses, the methods of standard addition shall be used for quantification of species concentration.



*ELASTOMERIC SAMPLE HOLDER FABRICATED OF MATERIAL FIRM ENOUGH TO SUPPORT THE SAMPLE

Figure 1

COMPACTION TESTER

App III

APPENDIX III—CHEMICAL ANALYSIS TEST METHODS

Tables 1, 2 and 3 specify the appropriate analytical procedures, described in "Test Methods for Evaluating Solid Waste" (SW-846), which should be used in determining whether the waste in question contains a given toxic constituent. Table 1 identifies the analytical class and the approved measurement techniques for each organic chemical listed in Appendix VII. Table 2 identifies the corresponding methods for the inorganic species. Table 3 identifies the specific sample preparation and measurement instrument introduction techniques which may be suitable for both the organic and inorganic species as well as the matrices of concern.

Prior to final selection of the analytical method the operator should consult the specific method descriptions in SW-846 for additional guidance on which of the approved methods should be employed for a specific waste analysis situation.

Table 1.—*Analytical Characteristics of Organic Chemicals*

Compound	Sample handling class/fraction	Non-GC methods	Measurement techniques		
			GC/MS	Conventional GC	Detector
Acetonitrile	Volatile		8.24	8.03	NSD
Acrolein	Volatile		8.24	8.03	NSD
Acrylamide	Volatile		8.24	8.01	FID
Acrylonitrile	Volatile		8.24	8.03	NSD
Benzene	Volatile		8.24	8.02	PID
Benz(a)anthracene	Extractable/BN	8.10 (HPLC)	8.25	8.10	FID
Benzo(a)pyrene	Extractable/BN	8.10 (HPLC)	8.25	8.10	FID
Benzotrichloride	Extractable/BN		8.25	8.12	ECD
Benzyl chloride	Volatile or Extractable/BN		8.24	8.01	HSD
			8.25	8.12	ECD
Benz(b)fluoranthene	Extractable/BN	8.10 (HPLC)	8.25	8.10	FID
Bis(2-chloroethoxymethane)	Volatile		8.24	8.01	HSD
Bis(2-chloroethyl)ether	Volatile		8.24	8.01	HSD
Bis(2-chloroisopropyl)ether	Volatile		8.24	8.01	HSD
Carbon disulfide	Volatile		8.24	8.01	HSD
Carbon tetrachloride	Volatile		8.24	8.01	HSD
Chlordane	Extractable/BN		8.25	8.08	HSD
Chlorinated dibenzodioxins	Extractable/BN		8.25	8.08	ECD
Chlorinated biphenyls	Extractable/BN		8.25	8.08	HSD
Chloroacetaldehyde	Volatile		8.24	8.01	HSD
Chlorobenzene	Volatile		8.24	8.01	HSD
				8.02	PID
Chloroform	Volatile		8.24	8.01	HSD
Chloromethane	Volatile		8.24	8.01	HSD
2-Chlorophenol	Extractable/BN		8.25	8.04	FID, ECD
Chrysene	Extractable/BN	8.10 (HPLC)	8.25	8.10	FID
Creosote	Extractable/BN		8.25	8.10	ECD
Cresol(s)	Extractable/A		8.25	8.04	FID, ECD
Cresylic acid(s)	Extractable/A		8.25	8.04	FID, ECD
Dichlorobenzene(s)	Extractable/BN		8.25	8.01	HSD
				8.02	PID
				8.12	ECD
Dichloroethane(s)	Volatile		8.24	8.01	HSD
Dichloromethane	Volatile		8.24	8.01	HSD
Dichlorophenoxy-acetic acid	Extractable/A		8.25	8.40	HSD
Dichloropropanol	Extractable/BN		8.25	8.12	ECD
2,4-Dimethylphenol	Extractable/A		8.25	8.04	FID, ECD
Dinitrobenzene	Extractable/BN		8.25	8.09	FID, ECD
4,6-Dinotro-o-cresol	Extractable/A		8.25	8.04	FID, ECD
2,4-Dinitrotoluene	Extractable/BN		8.25	8.09	FID, ECD
Endrin	Extractable/P		8.25	8.08	HSD
Ethyl ether	Volatile		8.24	8.01	FID
				8.02	FID
Formaldehyde	Volatile		8.24	8.01	FID
Formic acid	Extractable/BN		8.25	8.06	FID
Heptachlor	Extractable/P		8.25	8.06	HSD
Hexachlorobenzene	Extractable/BN		8.25	8.12	ECD
Hexachlorobutadiene	Extractable/BN		8.25	8.12	ECD
Hexachloroethane	Extractable/BN		8.25	8.12	ECD
Hexachlorocyclopentadiene	Extractable/BN		8.25	8.12	ECD
Lindane	Extractable/P		8.25	8.08	HSD

Table 1.—*Analytical Characteristics of Organic Chemicals—Continued*

Compound	Sample handling class/fraction	Non GC methods	Measurement techniques		
			GC/MS	Conventional GC	Detector
Maleic anhydride	Extractable/BN		8.25	8.06	ECD, FID
Methanol	Volatile		8.24	8.01	FID
Methomyl	Extractable/BN	8.32 (HPLC)			
Methyl ethyl ketone	Volatile		8.25	8.01	FID
				8.02	FID
Methyl isobutyl ketone	Volatile		8.25	8.01	FID
				8.02	FID
Naphthalene	Extractable/BN		8.25	8.10	FID
Napthoquinone	Extractable/BN		8.25	8.06	ECD, FID
				8.09	FID
Nitrobenzene	Extractable/BN		8.25	8.09	ECD, FID
4-Nitrophenol	Extractable/A		8.24	8.04	ECD, FID
Paraldehyde (trimer of acetaldehyde)	Volatile		8.24	8.01	FID
Pentachlorophenol	Extractable/A		8.25	8.04	ECD
Phenol	Extractable/A		8.25	8.04	ECD, FID
Phorate	Extractable/BN			8.22	FPD
Phosphorodithioic acid esters	Extractable/BN			8.06	ECD, FID
				8.09	ECD, FID
				8.22	FPD
Phthalic anhydride	Extractable/BN		8.25	8.06	ECD, FID
				8.09	ECD, FID
2-Picoline	Extractable/BN		8.25	8.06	ECD, FID
				8.09	ECD, FID
Pyridine	Extractable/BN		8.25	8.06	ECD, FID
				8.09	ECD, FID
Tetrachlorobenzene(s)	Extractable/BN		8.25	8.12	ECD
Tetrachloroethane(s)	Volatile		8.24	8.01	HSD
Tetrachloroethene	Volatile		8.24	8.01	HSD
Tetrachlorophenol	Extractable/A		8.24	8.04	ECD
Toluene	Volatile		8.24	8.02	PID
Toluenediamine	Extractable/BN		8.25		
Toluene diisocyanate(s)	Extractable/nonaqueous		8.25	8.06	FID
Toxaphene	Extractable/P		8.25	8.08	HSD
Trichloroethane	Volatile		8.24	8.01	HSD
Trichloroethene(s)	Volatile		8.24	8.01	HSD
Trichlorofluoromethane	Volatile		8.24	8.01	HSD
Trichlorophenol(s)	Extractable/A		8.25	8.04	HSD
2,4,5-TP (Silvex)	Extractable/A		8.25	8.40	HSD
Trichloropropane	Volatile		8.24	8.01	HSD
Vinyl chloride	Volatile		8.24	8.01	HSD
Vinylidene chloride	Volatile		8.24	8.01	HSD
Xylene	Volatile		8.24	8.02	PID

[1] Analyze for phenanthrene and carbazole, if these are present in a ratio between 1:4:1 and 5:1, creosote should be considered present.

ECD = Electron capture detetor; FID = Flame ionization detector, FPD = Flame photometric detector, HSD = Halide specific detector, HPLC = High pressure liquid chromotography, NSD = Nitrogen-specific detector; PID = Photoionization detector.

Table 2—*Analytical Characteristics of Inorganic Species*

Species	Sample handling class	Measurement technique	Method number
Antimony	Digestion	Atomic absorbtion-furnace/flame	8.50
Arsenic	Hydride	Atomic absorbtion-flame	8.51
Banum	Digestion	Atomic absorbtion-furnace/flame	8.52
Cadmium	Digestion	Atomic absorbtion-furnace/flame	8.53
Chromium	Digestion	Atomic absorbtion-furnace/flame	8.54
Cyanides	Hydrolysis	Atomic absorbtion-spectroscopy	8.55
Lead	Digestion	Atomic absorbtion-furnace/flame	8.56
Mercury	Cold Vapor	Atomic absorbtion	8.57
Nickel	Digestion	Atomic absorbtion-furnace/flame	8.58
Selenium	Hydride digestion	Atomic absorbtion-furnace/flame	8.59
Silver	Digestion	Atomic absorbtion-furnace/flame	8.60

TABLE 3 —*Sample Prepartion/Sample Introduction Techniques*

Sample handling class	Physical characteristics of waste[1]		
	Fluid	Paste	Solid
Voltile	Purge and trap	Purge and trap	Headspace
	Direct injection	Headspace	
Semivolatile and nonvolatile	Direct injection	Shake out	Shake out Soxhlet Sonication
	Shake out		
Inorganic	Direct injection		
	Digestion	Digestion	Digestion
	Hydride	Hydride	Hydride

[1]For purposes of this Table, fluid refers to readily pourable liquids, which may or may not contain suspended particles. Paste-like materials, while fluid in the sense of flowability, can be thought of as being thixotropic or plastic in nature, e.g. paints. Solid materials are those wastes which can be handled without a container (i.e., can be piled up without appreciable sagging).

Procedure and Method Number(s)

Digestion—See appropriate procedure for element of interest
Direct injection—8.80
Headspace—8.82
Hydride—See appropriate procedure for element of interest.
Purge & Trap—8.83
Shake out—8.84
Sonication—8.85
Soxhlet—8.86

APPENDIX IV—[RESERVED FOR RADIOACTIVE WASTE TEST METHODS]

APPENDIX V—[RESERVED

APPENDIX VI—[RESERVED FOR ETIOLOGIC AGENTS]

APPENDIX VII—BASIS FOR LISTING HAZARDOUS WASTE

EPA hazardous waste No	Hazardous constituents for which listed
F001	Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chlorinated 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
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)
K001	Pentachlorophenol, phenol, 2-chlorophenol, p-chloro-m-cresol, 2,4-dimethylphenyl, 2,4-dinitrophenol, trichlorophenols, tetrachlorophenols, 2,4-dinitrophenol, creosote, chrysene, naphthalene, fluoranthene, benzo(b)fluoranthene, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, benz(a)anthracene, dibenz(a)anthracene, acenaphthalene.
K002	Hexavalent chromium, lead
K003	Hexavalent chromium, lead.
K004	Hexavalent chromium.
K005	Hexavalent chromium, lead
K006	Hexavalent chromium
K007	Cyanide (complexed), hexavalent chromium
K008	Hexavalent chromium
K009	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid
K010	Chloroform, formaldehyde, methylene chloride, methyl chloride, paraldehyde, formic acid, chloroacetaldehyde
K011	Acrylonitrile, acetonitrile, hydrocyanic acid
K013	Hydrocyanic acid, acrylonitrile, acetonitrile
K014	Acetonitrile, acrylamide
K015	Benzyl chloride, chlorobenzene, toluene, benzotrichloride
K016	Hexachlorobenzene, hexachlorobutadiene, carbon tetrachloride, hexachloroethane, perchloroethylene
K017	Epichlorohydrin, chloroethers (bis(chloromethyl) ether and bis (2-chloroethyl) ethers), trichloropropane, dichloropropanols
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

EPA hazardous waste No	Hazardous constituents for which listed
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 phosphoro-thioic acid esters.
K037	Toluene, phosphorodithioic and phosphoro-thioic 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, napthalene, phenolic compounds, arsenic
K061	Hexavalent chromium, lead, cadmium
K062	Hexavalent chromium, lead
K069	Hexavalent chromium, lead, cadmium
K071	Mercury
K073	Chloroform, carbon tetrachloride, hexachloroethane, trichloroethane, tetrachloroethylene, dichloroethylene, 1,1,2,2-tetrachloroethane
K083	Aniline, diphenylamine, nitrobenzene, phenylenediamine
K084	Arsenic
K085	Benzene, dichlorobenzenes, trichlorobenzenes, tetrachlorobenzenes, pentachlorobenzene, hexachlorobenzene, benzyl chloride
K086	Lead, hexavalent chromium.
K087	Phenol, naphthalene
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

N A —Waste is hazardous because it fails the test for the characteristic of ignitability, corrosivity, or reactivity

Appendix VIII--Hazardous Constituents

Acetonitrile (Ethanenitrile)
Acetophenone (Ethanone, 1-phenyl)
3-(alpha-Acetonylbenzyl)-4-hydroxycoumarin and salts (Warfarin)
2-Acetylaminofluorene (Acetamide, N-(9H-fluoren-2-yl)-)
Acetyl chloride (Ethanoyl chloride)
1-Acetyl-2-thiourea (Acetamide, N-(aminothioxomethyl)-)
Acrolein (2-Propenal)
Acrylamide (2-Propenamide)
Acrylonitrile (2-Propenenitrile)
Aflatoxins
Aldrin (1,2,3,4,10,10-Hexachloro-1,4 4a,5,8,8a,8b-hexahydro-endo,exo-1,4:5,8-Dimethanonaphthalene)
Allyl alcohol (2-Propen-1-ol)
Aluminum phosphide
4-Aminobiphenyl ([1,1'-Biphenyl]-4-amine)
6-Amino-1,1a,2,8,8a,8b-hexahydro-8-(hydroxymethyl)-8a-methoxy-5-methylcarbamate azirino[2',3':3,4]pyrrolo[1,2-a]indole-4,7-dione, (ester) (Mitomycin C) (Azirino[2'3':3,4]pyrrolo(1,2-a)indole-4,7-dione, 6-amino-8-[((amino-

carbonyl)oxy)methyl]-1,1a,2,8,8a,8b-hexahydro-8amethoxy-5-methy-)
5-(Aminomethyl)-3-isoxazolol (3(2H)-Isoxazolone, 5-(aminomethyl)-) 4-Aminopyridine (4-Pyridinamine)
Amitrole (1H-1,2,4-Triazol-3-amine)
Aniline (Benzenamine)
Antimony and compounds, N.O.S.*
Aramite (Sulfurous acid, 2-chloroethyl-, 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester)
Arsenic and compounds, N.O.S.*
Arsenic acid (Orthoarsenic acid)
Arsenic pentoxide (Arsenic (V) oxide)
Arsenic trioxide (Arsenic (III) oxide)
Auramine (Benzenamine, 4,4'-carbonimidoylbis[N,N-Dimethyl-, monohydrochloride)
Azaserine (L-Serine, diazoacetate (ester))
Barium and compounds, N.O.S.*
Barium cyanide
Benz[c]acridine (3,4-Benzacridine)
Benz[a]anthracene (1,2-Benzanthracene)
Benzene (Cyclohexatriene)
Benzenearsonic acid (Arsonic acid, phenyl-)
Benzene, dichloromethyl- (Benzal chloride)
Benzenethiol (Thiophenol)
Benzidine ([1,1'-Biphenyl]-4,4'diamine)
Benzo[b]fluoranthene (2,3-Benzofluoranthene)
Benzo[j]fluoranthene (7,8-Benzofluoranthene)
Benzo[a]pyrene (3,4-Benzopyrene)
p-Benzoquinone (1,4-Cyclohexadienedione)
Benzotrichloride (Benzene, trichloromethyl-)
Benzyl chloride (Benzene, (chloromethyl)-)
Beryllium and compounds, N.O.S.*
Bis(2-chloroethoxy)methane (Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-])
Bis(2-chloroethyl) ether (Ethane, 1,1'-oxybis[2-chloro-])
N,N-Bis(2-chloroethyl)-2-naphthylamine (Chlornaphazine)
Bis(2-chloroisopropyl) ether (Propane, 2,2'-oxybis[2-chloro-])
Bis(chloromethyl) ether (Methane, oxybis[chloro-])
Bis(2-ethylhexyl) phthalate (1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester)
Bromoacetone (2-Propanone, 1-bromo-)
Bromomethane (Methyl bromide)
4-Bromophenyl phenyl ether (Benzene, 1-bromo-4-phenoxy-)
Brucine (Strychnidin-10-one, 2,3-dimethoxy-)
2-Butanone peroxide (Methyl ethyl ketone, peroxide)
Butyl benzyl phthalate (1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester)

2-sec-Butyl-4,6-dinitrophenol (DNBP) (Phenol, 2,4-dinitro-6-(1-methylpropyl)-)
Cadmium and compounds, N.O.S.*
Calcium chromate (Chromic acid, calcium salt)
Calcium cyanide
Carbon disulfide (Carbon bisulfide)
Carbon oxyfluoride (Carbonyl fluoride)
Chloral (Acetaldehyde, trichloro-)
Chlorambucil (Butanoic acid, 4-[bis(2-chloroethyl)amino]benzene-)
Chlordane (alpha and gamma isomers) (4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-3,4,7,7a-tetrahydro-) (alpha and gamma isomers)
Chlorinated benzenes, N.O.S.*
Chlorinated ethane, N.O.S.*
Chlorinated fluorocarbons, N.O.S.*
Chlorinated naphthalene, N.O.S.*
Chlorinated phenol, N.O.S.*
Chloroacetaldehyde (Acetaldehyde, chloro-)
Chloroalkyl ethers, N.O.S.*
p-Chloroaniline (Benzenamine, 4-chloro-)
Chlorobenzene (Benzene, chloro-)
Chlorobenzilate (Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-, ethyl ester)
p-Chloro-m-cresol (Phenol, 4-chloro-3-methyl)
1-Chloro-2,3-epoxypropane (Oxirane, 2-(chloromethyl)-)
2-Chloroethyl vinyl ether (Ethene, (2-chloroethoxy)-)
Chloroform (Methane, trichloro-)
Chloromethane (Methyl chloride)
Chloromethyl methyl ether (Methane, chloromethoxy-)
2-Chloronaphthalene (Naphthalene, beta-chloro-)
2-Chlorophenol (Phenol, o-chloro-)
1-(o-Chlorophenyl)thiourea (Thiourea, (2-chlorophenyl)-)
3-Chloropropionitrile (Propanenitrile, 3-chloro-)
Chromium and compounds, N.O.S.*
Chrysene (1,2-Benzphenanthrene)
Citrus red No. 2 (2-Naphthol, 1-[(2,5-dimethoxyphenyl)azo]-)
Coal tars
Copper cyanide
Creosote (Creosote, wood)
Cresols (Cresylic acid) (Phenol, methyl-)
Crotonaldehyde (2-Butenal)
Cyanides (soluble salts and complexes), N.O.S.*
Cyanogen (Ethanedinitrile)
Cyanogen bromide (Bromine cyanide)
Cyanogen chloride (Chlorine cyanide)
Cycasin (beta-D-Glucopyranoside, (methyl-ONN-azoxy)methyl-)
2-Cyclohexyl-4,6-dinitrophenol (Phenol, 2-cyclohexyl-4,6-dinitro-)
Cyclophosphamide (2H-1,3,2,-Oxazaphosphorine, [bis(2-chloroethyl)amino]-tetrahydro-, 2-oxide)
Daunomycin (5,12-Naphthacenedione, (8S-cis)-8-acetyl-10-[(3-amino-2,3,6-trideoxy)-

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* The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this appendix.

alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-)
DDD (Dichlorodiphenyldichloroethane) (Ethane, 1,1-dichloro-2,2-bis(p-chlorophenyl)-)
DDE (Ethylene, 1,1-dichloro-2,2-bis(4-chlorophenyl)-)
DDT (Dichlorodiphenyltrichloroethane) (Ethane, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)-)
Diallate (S-(2,3-dichloroallyl) diisopropylthiocarbamate)
Dibenz[a,h]acridine (1,2,5,6-Dibenzacridine)
Dibenz[a,j]acridine (1,2,7,8-Dibenzacridine)
Dibenz[a,h]anthracene (1,2,5,6-Dibenzanthracene)
7H-Dibenzo[c,g]carbazole (3,4,5,6-Dibenzcarbazole)
Dibenzo[a,e]pyrene (1,2,4,5-Dibenzpyrene)
Dibenzo[a,h]pyrene (1,2,5,6-Dibenzpyrene)
Dibenzo[a,i]pyrene (1,2,7,8-Dibenzpyrene)
1,2-Dibromo-3-chloropropane (Propane, 1,2-dibromo-3-chloro-)
1,2-Dibromoethane (Ethylene dibromide)
Dibromomethane (Methylene bromide)
Di-n-butyl phthalate (1,2-Benzenedicarboxylic acid, dibutyl ester)
o-Dichlorobenzene (Benzene, 1,2-dichloro-)
m-Dichlorobenzene (Benzene, 1,3-dichloro-)
p-Dichlorobenzene (Benzene, 1,4-dichloro-)
Dichlorobenzene, N.O.S.* (Benzene, dichloro-, N.O.S.*)
3,3'-Dichlorobenzidine ([1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-)
1,4-Dichloro-2-butene (2-Butene, 1,4-dichloro-)
Dichlorodifluoromethane (Methane, dichlorodifluoro-)
1,1-Dichloroethane (Ethylidene dichloride)
1,2-Dichloroethane (Ethylene dichloride)
trans-1,2-Dichloroethene (1,2-Dichloroethylene)
Dichloroethylene, N.O.S.* (Ethene, dichloro-, N.O.S.*)
1,1-Dichloroethylene (Ethene, 1,1-dichloro-)
Dichloromethane (Methylene chloride)
2,4-Dichlorophenol (Phenol, 2,4-dichloro-)
2,6-Dichlorophenol (Phenol, 2,6-dichloro-)
2,4-Dichlorophenoxyacetic acid (2,4-D), salts and esters (Acetic acid, 2,4-dichlorophenoxy-, salts and esters)
Dichlorophenylarsine (Phenyl dichloroarsine)
Dichloropropane, N.O.S.* (Propane, dichloro-, N.O.S.*)
1,2-Dichloropropane (Propylene dichloride)
Dichloropropanol, N.O.S.* (Propanol, dichloro-, N.O.S.*)
Dichloropropene, N.O.S.* (Propene, dichloro-, N.O.S.*)
1,3-Dichloropropene (1-Propene, 1,3-dichloro-)
Dieldrin (1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octa-hydro-endo,exo-1,4:5,8-Dimethanonaphthalene)
1,2:3,4-Diepoxybutane (2,2'-Bioxirane)
Diethylarsine (Arsine, diethyl-)
N,N-Diethylhydrazine (Hydrazine, 1,2-diethyl)
O,O-Diethyl S-methyl ester of phosphorodithioic acid (Phosphorodithioic acid, O,O-diethyl S-methyl ester
O,O-Diethylphosphoric acid, O-p-nitrophenyl ester (Phosphoric acid, diethyl p-nitrophenyl ester)
Diethyl phthalate (1,2-Benzenedicarboxylic acid, diethyl ester)
O,O-Diethyl O-2-pyrazinyl phosphorothioate (Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester
Diethylstilbesterol (4,4'-Stilbenediol, alpha,alpha-diethyl, bis(dihydrogen phosphate, (E)-)
Dihydrosafrole (Benzene, 1,2-methylenedioxy-4-propyl-)
3,4-Dihydroxy-alpha-(methylamino)methyl benzyl alcohol (1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-)
Diisopropylfluorophosphate (DFP) (Phosphorofluoridic acid, bis(1-methylethyl) ester)
Dimethoate (Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester
3,3'-Dimethoxybenzidine ([1,1'-Biphenyl]-4,4'diamine, 3-3'-dimethoxy-)
p-Dimethylaminoazobenzene (Benzenamine, N,N-dimethyl-4-(phenylazo)-)
7,12-Dimethylbenz[a]anthracene (1,2-Benzanthracene, 7,12-dimethyl-)
3,3'-Dimethylbenzidine ([1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-)
Dimethylcarbamoyl chloride (Carbamoyl chloride, dimethyl-)
1,1-Dimethylhydrazine (Hydrazine, 1,1-dimethyl-)
1,2-Dimethylhydrazine (Hydrazine, 1,2-dimethyl-)
3,3-Dimethyl-1-(methylthio)-2-butanone, O-[(methylamino) carbonyl]oxime (Thiofanox)
alpha,alpha-Dimethylphenethylamine (Ethanamine, 1,1-dimethyl-2-phenyl-)
2,4-Dimethylphenol (Phenol, 2,4-dimethyl-)
Dimethyl phthalate (1,2-Benzenedicarboxylic acid, dimethyl ester)
Dimethyl sulfate (Sulfuric acid, dimethyl ester)
Dinitrobenzene, N.O.S.* (Benzene, dinitro-, N.O.S.*)
4,6-Dinitro-o-cresol and salts (Phenol, 2,4-dinitro-6-methyl-, and salts)
2,4-Dinitrophenol (Phenol, 2,4-dinitro-)
2,4-Dinitrotoluene (Benzene, 1-methyl-2,4-dinitro-)
2,6-Dinitrotoluene (Benzene, 1-methyl-2,6-dinitro-)
Di-n-octyl phthalate (1,2-Benzenedicarboxylic acid, dioctyl ester)
1,4-Dioxane (1,4-Diethylene oxide)
Diphenylamine (Benzenamine, N-phenyl-)
1,2-Diphenylhydrazine (Hydrazine, 1,2-diphenyl-)

Di-n-propylnitrosamine (N-Nitroso-di-n-propylamine)
Disulfoton (O,O-diethyl S-[2-(ethylthio)ethyl] phosphorodithioate)
2,4-Dithiobiuret (Thioimidodicarbonic diamide)
Endosulfan (5-Norbornene, 2,3-dimethanol, 1,4,5,6,7,7-hexachloro-, cyclic sulfite)
Endrin and metabolites (1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,endo-1,4:5,8-dimethanonaphthalene, and metabolites)
Ethyl carbamate (Urethan) (Carbamic acid, ethyl ester)
Ethyl cyanide (propanenitrile)
Ethylenebisdithiocarbamic acid, salts and esters (1,2-Ethanediylbiscarbamodithioic acid, salts and esters
Ethyleneimine (Aziridine)
Ethylene oxide (Oxirane)
Ethylenethiourea (2-Imidazolidinethione)
Ethyl methacrylate (2-Propenoic acid, 2-methyl-, ethyl ester)
Ethyl methanesulfonate (Methanesulfonic acid, ethyl ester)
Fluoranthene (Benzo[j,k]fluorene)
Fluorine
2-Fluoroacetamide (Acetamide, 2-fluoro-)
Fluoroacetic acid, sodium salt (Acetic acid, fluoro-, sodium salt)
Formaldehyde (Methylene oxide)
Formic acid (Methanoic acid)
Glycidylaldehyde (1-Propanol-2,3-epoxy)
Halomethane, N.O.S.*
Heptachlor (4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-)
Heptachlor epoxide (alpha, beta, and gamma isomers) (4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7-tetrahydro-, alpha, beta, and gamma isomers)
Hexachlorobenzene (Benzene, hexachloro-)
Hexachlorobutadiene (1,3-Butadiene, 1,1,2,3,4,4-hexachloro-)
Hexachlorocyclohexane (all isomers) (Lindane and isomers)
Hexachlorocyclopentadiene (1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-)
Hexachloroethane (Ethane, 1,1,1,2,2,2-hexachloro-)
1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo,endo-dimethanonaphthalene (Hexachlorohexahydro-endo,endo-dimethanonaphthalene)
Hexachlorophene (2,2-Methylenebis(3,4,6-trichlorophenol))
Hexachloropropene (1-Propene, 1,1,2,3,3,3-hexachloro-)
Hexaethyl tetraphosphate (Tetraphosphoric acid, hexaethyl ester)
Hydrazine (Diamine)
Hydrocyanic acid (Hydrogen cyanide)
Hydrofluoric acid (Hydrogen fluoride)
Hydrogen sulfide (Sulfur hydride)
Hydroxydimethylarsine oxide (Cacodylic acid)
Indeno(1,2,3-cd)pyrene (1,10-(1,2-phenylene)pyrene)
Iodomethane (Methyl iodide)
Iron dextran (Ferric dextran)
Isocyanic acid, methyl ester (Methyl isocyanate)
Isobutyl alcohol (1-Propanol, 2-methyl-)
Isosafrole (Benzene, 1,2-methylenedioxy-4-allyl-)
Kepone (Decachlorooctahydro-1,3,4-Methano-2H-cyclobuta[cd]pentalen-2-one)
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)
Lead and compounds, N.O.S.*
Lead acetate (Acetic acid, lead salt)
Lead phosphate (Phosphoric acid, lead salt)
Lead subacetate (Lead, bis(acetato-O)tetrahydroxytri-)
Maleic anhydride (2,5-Furandione)
Maleic hydrazide (1,2-Dihydro-3,6-pyridazinedione)
Malononitrile (Propanedinitrile)
Melphalan (Alanine, 3-[p-bis(2-chloroethyl)amino]phenyl-, L-)
Mercury fulminate (Fulminic acid, mercury salt)
Mercury and compounds, N.O.S.*
Methacrylonitrile (2-Propenenitrile, 2-methyl-)
Methanethiol (Thiomethanol)
Methapyrilene (Pyridine, 2-[(2-dimethylamino)ethyl]-2-thenylamino-)
Metholmyl (Acetimidic acid, N-[(methylcarbamoyl)oxy]thio-, methyl ester
Methoxychlor (Ethane, 1,1,1-trichloro-2,2'-bis(p-methoxyphenyl)-)
2-Methylaziridine (1,2-Propylenimine)
3-Methylcholanthrene (Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-)
Methyl chlorocarbonate (Carbonochloridic acid, methyl ester)
4,4'-Methylenebis(2-chloroaniline) (Benzenamine, 4,4'-methylenebis-(2-chloro-)
Methyl ethyl ketone (MEK) (2-Butanone)
Methyl hydrazine (Hydrazine, methyl-)
2-Methyllactonitrile (Propanenitrile, 2-hydroxy-2-methyl-)
Methyl methacrylate (2-Propenoic acid, 2-methyl-, methyl ester)
Methyl methanesulfonate (Methanesulfonic acid, methyl ester)
2-Methyl-2-(methylthio)propionaldehyde-o-(methylcarbonyl) oxime (Propanal, 2-methyl-2-(methylthio)-, O-[(methylamino)carbonyl]oxime)
N-Methyl-N'-nitro-N-nitrosoguanidine (Guanidine, N-nitroso-N-methyl-N'-nitro-)
Methyl parathion (O,O-dimethyl O-(4-nitrophenyl) phosphorothioate)
Methylthiouracil (4-1H-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-)

Mustard gas (Sulfide, bis(2-chloroethyl)-)
Naphthalene
1,4-Naphthoquinone (1,4-Naphthalenedione)
1-Naphthylamine (alpha-Naphthylamine)
2-Naphthylamine (beta-Naphthylamine)
1-Naphthyl-2-thiourea (Thiourea, 1-naphthalenyl-)
Nickel and compounds, N.O.S.*
Nickel carbonyl (Nickel tetracarbonyl)
Nickel cyanide (Nickel (II) cyanide)
Nicotine and salts (Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts)
Nitric oxide (Nitrogen (II) oxide)
p-Nitroaniline (Benzenamine, 4-nitro-)
Nitrobenzine (Benzene, nitro-)
Nitrogen dioxide (Nitrogen (IV) oxide)
Nitrogen mustard and hydrochloride salt (Ethanamine, 2-chloro-, N-(2-chloroethyl)-N-methyl-, and hydrochloride salt)
Nitrogen mustard N-Oxide and hydrochloride salt (Ethanamine, 2-chloro-, N-(2-chloroethyl)-N-methyl-, and hydrochloride salt)
Nitroglycerine (1,2,3-Propanetriol, trinitrate)
4-Nitrophenol (Phenol, 4-nitro-)
4-Nitroquinoline-1-oxide (Quinoline, 4-nitro-1-oxide-)
Nitrosamine, N.O.S.*
N-Nitrosodi-n-butylamine (1-Butanamine, N-butyl-N-nitroso-)
N-Nitrosodiethanolamine (Ethanol, 2,2'-(nitrosoimino)bis-)
N-Nitrosodiethylamine (Ethanamine, N ethyl-N-nitroso-)
N-Nitrosodimethylamine (Dimethylnitrosamine)
N-Nitroso-N-ethylurea (Carbamide, N-ethyl-N-nitroso-)
N-Nitrosomethylethylamine (Ethanamine, N-methyl-N-nitroso-)
N-Nitroso-N-methylurea (Carbamide, N-methyl-N-nitroso-)
N-Nitroso-N-methylurethane (Carbamic acid, methylnitroso-, ethyl ester)
N-Nitrosomethylvinylamine (Ethenamine, N-methyl-N-nitroso-)
N-Nitrosomorpholine (Morpholine, N-nitroso-)
N-Nitrosonornicotine (Nornicotine, N-nitroso-)
N-Nitrosopiperidine (Pyridine, hexahydro-, N-nitroso-)
Nitrosopyrrolidine (Pyrrole, tetrahydro-, N-nitroso-)
N-Nitrososarcosine (Sarcosine, N-nitroso-)
5-Nitro-o-toluidine (Benzenamine, 2-methyl-5-nitro-)
Octamethylpyrophosphoramide (Diphosphoramide, octamethyl-)
Osmium tetroxide (Osmium (VIII) oxide)
7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid (Endothal)
Paraldehyde (1,3,5-Trioxane, 2,4,6 trimethyl-)
Parathion (Phosphorothioic acid, O,O-diethyl O-(p-nitrophenyl) ester
Pentachlorobenzene (Benzene, pentachloro-)
Pentachloroethane (Ethane, pentachloro-)
Pentachloronitrobenzene (PCNB) (Benzene, pentachloronitro-)
Pentachlorophenol (Phenol, pentachloro-)
Phenacetin (Acetamide, N-(4-ethoxyphenyl)-)
Phenol (Benzene, hydroxy-)
Phenylenediamine (Benzenediamine)
Phenylmercury acetate (Mercury, acetatophenyl-)
N-Phenylthiourea (Thiourea, phenyl-)
Phosgene (Carbonyl chloride)
Phosphine (Hydrogen phosphide)
Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester (Phorate)
Phosphorothioic acid, O,O-dimethyl O-[p-((dimethylamino)sulfonyl)phenyl] ester (Famphur)
Phthalic acid esters, N.O.S.* (Benzene, 1,2-dicarboxylic acid, esters, N.O.S.*)
Phthalic anhydride (1,2-Benzenedicarboxylic acid anhydride)
2-Picoline (Pyridine, 2-methyl-)
Polychlorinated biphenyl, N.O.S.*
Potassium cyanide
Potassium silver cyanide (Argentate(1-), dicyano-, potassium)
Pronamide (3,5-Dichloro-N-(1,1-dimethyl-2-propynyl)benzamide)
1,3-Propane sultone (1,2-Oxathiolane, 2,2-dioxide)
n-Propylamine (1-Propanamine)
Propylthiouracil
(Undecamethylenediamine, N,N'-bis(2-chlorobenzyl)-, dihydrochloride)
2-Propyn-1-ol (Propargyl alcohol)
Pyridine
Reserpine (Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[(3,4,5-trimethoxybenzoyl)oxy]-, methyl ester)
Resorcinol (1,3-Benzenediol)
Saccharin and salts (1,2-Benzoisothiazolin-3-one, 1,1-dioxide, and salts)
Safrole (Benzene, 1,2-methylenedioxy-4-allyl-)
Selenious acid (Selenium dioxide)
Selenium and compounds, N.O.S.*
Selenium sulfide (Sulfur selenide)
Selenourea (Carbamimidoselenoic acid)
Silver and compounds, N.O.S.*
Silver cyanide
Sodium cyanide
Streptozotocin (D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-)
Strontium sulfide
Strychnine and salts (Strychnidin-10-one, and salts)
1,2,4,5-Tetrachlorobenzene (Benzene, 1,2,4,5-tetrachloro-)
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) (Dibenzo-p-dioxin, 2,3,7,8-tetrachloro-)
Tetrachloroethane, N.O.S.* (Ethane, tetrachloro-, N.O.S.*)

1,1,1,2-Tetrachlorethane (Ethane, 1,1,1,2-tetrachloro-)
1,1,2,2-Tetrachlorethane (Ethane, 1,1,2,1-tetrachloro-)
Tetrachloroethane (Ethene, 1,1,2,2-tetrachloro-)
Tetrachloromethane (Carbon tetrachloride)
2,3,4,6,-Tetrachlorophenol (Phenol, 2,3,4,6-tetrachloro-)
Tetraethyldithiopyrophosphate (Dithiopyrophosphoric acid, tetraethyl-ester)
Tetraethyl lead (Plumbane, tetraethyl-)
Tethraethylpyrophosphate (Pyrophosphoric acide, tetraethyl ester)
Tetranitromethane (Methane, tetranitro-)
Thallium and compounds, N.O.S.*
Thallic oxide (Thallium (III) oxide)
Thallium (I) acetate (Acetic acid, thallium (I) salt)
Thallium (I) carbonate (Carbonic acid, dithallium (I) salt)
Thallium (I) chloride
Thallium (I) nitrate (Nitric acid, thallium (I) salt)
Thallium selenite
Thallium (I) sulfate (Sulfuric acid, thallium (I) salt)
Thioacetamide (Ethanethioamide)
Thiosemicarbazide (Hydrazinecarbothioamide)
Thiourea (Carbamide thio-)
Thiuram (Bis(dimethylthiocarbamoyl) disulfide)
Toluene (Benzene, methyl)-
Toluenediamine (Diaminotoluene)
o-Toluidine hydrochloride (Benzenamine, 2-methyl-, hydrochloride)
Tolylene diisocyanate (Benzene, 1,3-diisocyanatomethyl-)
Toxaphene (Camphene, octachloro-)
Tribromomethane (Bromoform)
1,2,4-Trichlorobenzene (Benzene, 1,2,4-trichloro)-
1,1,1-Trichloroethane (Methyl chloroform)
1,1,2-Trichloroethane (Ethane, 1,1,2-trichloro-)
Trichloroethene (Trichloroethylene)
Trichloromethanethiol (Methanethiol, trichloro-)
2,4,5-Trichloromonofluoromethane (Methane, trichlorofluoro-)
2,4,5-Trichlorophenol (Phenol, 2,4,5-trichloro-)
2,4,6-Trichlorophenol (Phenol, 2,4,6-trichloro-)
2,4,5-Trichlorophenoxyacetic acid (2,4,5-T) (Acetic acid, 2,4,5-trichlorophenoxy-)
2,4,5-Trichlorophenoxypropionic acid (2,4,5-TP) (Silvex) Propionic acid, 2-(2,4,5-trichlorophenoxy)-)
Trichloropropane, N.O.S.* (Propane, trichloro-, N.O.S.*)
1,2,3-Trichloropropane (Propane, 1,2,3-trichloro-)
O,O,O-Triethyl phosphorothioate (Phosphorothioic acid, O,O,O-triethyl ester)
sym-Trinitrobenzene (Benzene, 1,3,4-trinitro-)
Tris(1-azridinyl) phosphine sulfide (Phosphine sulfide, trist(1-aziridinyl-)
Tris(2,3-dibromopropyl) phosphate (1-Propanol, 2,3-dibromo-, phosphate)
Trypan blue (2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl (1,1'-biphenyl)-4,4'-divl)bis(azo)]bis(5-amino-4-hydroxy-, tetrasodium salt)
Uracil mustard (Uracil 5-[bis(2-chloroethyl)amino]-)

Vanadic acid, ammonium salt (ammonium vanadate)
Vanadium pentoxide (Vanadium (V) oxide)
Vinyl chloride (Ethene, chloro-)
Zinc cyanide
Zinc phosphide

Section 4.00 Notification of Hazardous Waste Activity Regulations.

Section 4.01 General.

(a) Applicability.

Any person that engages in a hazardous waste activity in the State of West Virginia shall notify the Chief of these activities, unless such activities are exempted from the requirements of these regulations.

(b) Any person as described in paragraph (a) that has notified the EPA or is subject to the requirements to notify EPA as specified in [Volume 45, No. 39 of the Federal Register, dated February 26, 1980, pages 12746 through 12754] is subject to the provisions of this section.

(c) The purpose of this section is to provide a means for the State of West Virginia to utilize the information provided by all who complied with the notification requirements of EPA as described in paragraph (b) of these regulations and to assure that all persons who did not notify EPA as described in paragraph (b) of these regulations or all who initiated hazardous waste activities subsequent to the requirements of EPA as referenced above in paragraph (b), shall notify the Chief of their hazardous waste activities.

Section 4.02 Notification.

(a) Any person that notified EPA of hazardous waste activities as referenced above in Section 4.01 shall provide a copy of that notification to the Chief within thirty (30) days of the effective date of these regulations.

(b) Any person involved in hazardous waste activities that did not comply with the notification requirements of EPA, as

referenced above in Section 4.01, but is subject to those requirements shall notify the Chief in writing of their hazardous waste activities within thirty (30) days of the effective date of these regulations. Notification may be accomplished by the use of EPA Form 8700-12 or the provision of the same information in any other manner selected by the notifier.

(c) Any person exempted from the federal notification requirements but subject to West Virginia notification requirements as specified in 3.01.04 and 3.01.05 of these regulations shall notify the Chief in writing of their hazardous waste activities within ninety (90) days of the effective date of these regulations or the date of initiation of such activities, which ever is later. Notification may be accomplished by use of EPA Form 8700-12 or the provisions of the same information in any other manner selected by the notifier.

(d) One (1) notification form is required for each generator.

(e) A notification form is required for each storage, treatment, disposal or other facility. However, if one facility site includes more than one storage, treatment or disposal activity, only one notification form for the entire facility site is required.

(f) Generators that store, treat or dispose of hazardous waste on-site shall file a notification form for generation activities as well as storage, and treatment and disposal activities, unless such activities are exempted from the requirements of these regulations.

(d) New generators and (those initiating activities subsequent to EPA notification period referenced in paragraph 4.01(b) of the regulations) shall comply with the EPA

identification number requirements and shall provide a copy of their application for an EPA identification number to the Chief.

Section 5.00 [Reserved.]

See page 58 Filed 10/4/83