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Notice of Rulemaking Hearing

Hearings will be conducted in the manner prescribed by the Uniform Administrative Procedures Act, Tennessee Code Annotated, Section 4-5-204. For questions and copies of the notice, contact the person listed below.

Agency/Board/Commission: Environment and Conservation
Division: Solid Waste Management
Contact Person: David Moran
Address: 5th Floor, L & C Annex, 401 Church Street, Nashville, TN 37243-1535
Phone: (615) 532-0875
Email: David.Moran@tn.gov

Any Individuals with disabilities who wish to participate in these proceedings (to review these filings) and may require aid to facilitate such participation should contact the following at least 10 days prior to the hearing:

ADA Contact: ADA Coordinator
Address: 12th Floor, L&C Tower, 401 Church Street, Nashville, Tennessee 37243
Phone: 1-866-253-5827 (toll free) or (615) 532-0200; Hearing impaired callers may use the TN Relay Service 1-800-848-0298
Email: Beverly.Evans@tn.gov

Hearing Location(s) (for additional locations, copy and paste table)

Address 1:	17th Floor, L & C Tower, Ruth Neff Conference Room – Side A
Address 2:	401 Church Street
City:	Nashville, Tennessee
Zip:	37243
Hearing Date :	08/05/11
Hearing Time:	9:00 a.m. X CST ___EST

Additional Hearing Information:

The Division has prepared a redline version of this notice of the Notice of Rulemaking Hearing to aid public review and comment on this notice. Copies of these initial draft rules (and its redline version) are available for review at the Tennessee Department of Environment and Conservation's (TDEC's) Environmental Field Offices located as follows:

Memphis Environmental Field Office
8383 Wolf Lake Drive
Memphis, TN 38133
(901) 371-3000/ 1-888-891-8332

Cookeville Environmental Field Office
1221 South Willow Avenue
Cookeville, TN 38506
(931) 432-4015/ 1-888-891-8332

Jackson Environmental Field Office
1625 Hollywood Drive
Jackson, TN 38305

Chattanooga Environmental Field Office
Suite 550 - State Office Building
540 McCallie Avenue

(731) 512-1300/ 1-888-891-8332

Chattanooga, TN 37402-2013
(423) 634-5745/ 1-888-891-8332

Columbia Environmental Field Office
2484 Park Plus Drive
Columbia, TN 38401
(931) 380-3371/ 1-888-891-8332

Knoxville Environmental Field Office
3711 Middlebrook Pike
Knoxville, TN 37921-5602
(865)594-6035/ 1-888-891-8332

Nashville Environmental Field Office
711 R. S. Gass Blvd.
Nashville, TN 37243-1550
(615) 687-7000/1-888-891-8332

Johnson City Environmental Field Office
2305 Silverdale Road
Johnson City, TN 37601-2162
(423) 854-5400/1-888-891-8332

The redline version of this Notice of Rulemaking Hearing can be accessed for review using http://tn.gov/environment/swm/ppo.

Copies are available for review at the Nashville Central Office (see address below).

Tennessee Department of Environment and Conservation
Division of Solid Waste Management
5th Floor, L&C Tower
401 Church Street
Nashville, Tennessee 37243-1535
(615) 532-0780

Office hours for the Division's offices are from 8:00 AM to 4:30 PM, Monday through Friday (excluding holidays). Appointments should be made for all file reviews.

Oral or written comments are invited at the hearing. Additionally, written comments may be submitted prior to or after the public hearing to: Division of Solid Waste Management; Tennessee Department of Environment and Conservation; Attention: Mr. David Moran; 5th Floor, L & C Tower; 401 Church Street; Nashville, Tennessee 37243-1535; telephone 615-532-0875 or FAX 615-532-0886. However, such written comments must be received by the Division by 4:30 PM CST, August 10, 2011, in order to assure consideration. For further information, please contact Mr. David Moran at the above address or telephone number or by e-mail at David.Moran@tn.gov.

Revision Type (check all that apply):

___ Amendment
X New
X Repeal

Rule(s) (**ALL** chapters and rules contained in filing must be listed. If needed, copy and paste additional tables to accommodate more than one chapter. Please enter only **ONE** Rule Number/Rule Title per row.)

Chapter Number	**Chapter Title**
1200-01-11	Hazardous Waste Management
Rule Number	**Rule Title**
1200-01-11-.10	Land Disposal Restrictions
1200-01-11-.11	Standards for the Managament of Used Oil
1200-01-11-.12	Standards for Universal Waste Management

Chapter Number	**Chapter Title**
0400-12-01	Hazardous Waste Management
Rule Number	**Rule Title**
0400-12-01-.10	Land Disposal Restrictions
0400-12-01-.11	Standards for the Managament of Used Oil
0400-12-01-.12	Standards for Universal Waste Management

(Place substance of rules and other info here. Statutory authority must be given for each rule change. For information on formatting rules go to http://tn.gov/sos/rules/1360/1360.htm)

Repeals

Chapter 1200-01-11
Hazardous Waste Management Regulations

Rules 1200-01-11-.10 Land Diposal Restrictions, 1200-01-11-.11 Standards for the Managament of Used Oil, and 1200-01-11-.12 Standards for Universal Waste Management are repealed.

Authority: T.C.A. §§ 68-212-101 et seq. and 4-5-201 et seq.

New Rules

Chapter 0400-12-01
Hazardous Waste Management Regulations

0400-12-01-.10 Land Disposal Restrictions.

(1) General

(a) Purpose, Scope and Applicability [40 CFR 268.1]

1. This rule identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances under which an otherwise prohibited waste may continue to be land disposed.

2. Except as specifically provided otherwise in this Rule 0400-12-01-.02, the requirements of this rule apply to persons who generate or transport hazardous waste and owners and operators of hazardous waste treatment, storage, and disposal facilities.

3. Restricted wastes may continue to be land disposed as follows:

(i) Where persons have been granted an extension to the effective date of a prohibition under paragraph (2) of this rule or pursuant to subparagraph (e) of this paragraph with respect to those wastes covered by the extension;

(ii) Where persons have been granted an exemption from a prohibition pursuant to a petition under subparagraph (f) of this paragraph, with respect to those wastes and units covered by the petition;

(iii) Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under this rule, or 40 CFR 148, are not prohibited if the wastes:

(I) Are disposed into a nonhazardous or hazardous injection well as defined in Tennessee's Underground Injection Control Program, Chapter 1200-04-06 [40 CFR 146.6(a)]; and

(II) Do not exhibit any prohibited characteristic of hazardous waste identified in Rule 0400-12-01-.02(3) at the point of injection; and

(iv) Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under this rule, are not prohibited if the wastes meet any of the following criteria, unless the wastes are subject to a specified method of treatment other than DEACT in subparagraph (3)(a) of this rule, or are D003 reactive cyanide:

(I) The wastes are managed in a treatment system which subsequently discharges to waters of the U.S. pursuant to a permit issued under section 402 of the Clean Water Act; or

(II) The wastes are treated for purposes of the pretreatment requirements of section 307 of the Clean Water Act; or

(III) The wastes are managed in a zero discharge system engaged in Clean Water Act-equivalent treatment as defined in part (2)(h)1 of this rule; or

(IV) The wastes no longer exhibit a prohibited characteristic at the point of land disposal (i.e., placement in a surface impoundment).

4. The requirements of this rule shall not affect the availability of a waiver under section 121(d)(4) of the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

5. The following hazardous wastes are not subject to any provision of this rule:

(i) Waste generated by small quantity generators of less than 100 kilograms of non-acute hazardous waste or less than 1 kilogram of acute hazardous waste per month, as defined in Rule 0400-12-01-.02(1)(e);

(ii) Waste pesticides that a farmer disposes of pursuant to Rule 0400-12-01-.03(1)(a)7;

(iii) Wastes identified or listed as hazardous after November 8, 1984 for which Tennessee has not promulgated land disposal prohibitions or treatment standards; or

(iv) De minimis losses of characteristic wastes to wastewaters are not considered to be prohibited wastes and are defined as losses from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; and relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; rinsate from empty containers or from containers that are rendered empty by that rinsing; and laboratory wastes not exceeding one per cent of the total flow of wastewater into the facility's headworks on an annual basis, or with a combined annualized average concentration not exceeding one part per million in the headworks of the facility's wastewater treatment or pretreatment facility.

6. Universal waste handlers and universal waste transporters (as defined in Rule 0400-12-01-.01(2)(a)) are exempt from subparagraphs (1)(g) and (4)(a) of this rule for the hazardous wastes listed in Rule 0400-12-01-.12(1)(a). These handlers are subject to regulation under Rule 0400-12-01-.12.

(b) Definitions Applicable in this Rule [40 CFR 268.2]

When used in this rule the following terms have the meanings given below:

1. "Debris" means solid material exceeding a 60 mm particle size that is intended for disposal and that is: a manufactured object; or plant or animal matter; or natural geologic material. However, the following materials are not debris: any material for which a specific treatment standard is provided in paragraph (3) of this rule, namely lead acid batteries, cadmium batteries, and radioactive lead solids; process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been

treated to the standards provided by subparagraph (3)(f) of this rule and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

2. "Halogenated organic compounds" or "HOCs" means those compounds having a carbon-halogen bond which are listed under Appendix III of paragraph (5) of this rule.

3. "Hazardous constituent or constituents" means those constituents listed in Appendix VIII to Rule 0400-12-01-.02(5).

4. "Hazardous debris" means debris that contains a hazardous waste listed in Rule 0400-12-01-.02(4), or that exhibits a characteristic of hazardous waste identified in Rule 0400-12-01-.02(3). Any deliberate mixing of prohibited hazardous waste with debris that changes its treatment classification (i.e., from waste to hazardous debris) is not allowed under the dilution prohibition in subparagraph (c) of this paragraph.

5. "Inorganic metal-bearing waste" is one for which the Department established treatment standards for metal hazardous constituents, and which does not otherwise contain significant organic or cyanide content as described in subpart (c)3(i) of this paragraph, and is specifically listed in Appendix XI of this rule.

6. "Land disposal" means placement in or on the land, except in a corrective action management unit or staging pile, and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, underground mine or cave, or placement in a concrete vault, or bunker intended for disposal purposes.

7. "Nonwastewaters" are wastes that do not meet the criteria for wastewaters in part 11 of this subparagraph.

8. "Polychlorinated biphenyls" or "PCBs" are halogenated organic compounds defined in accordance with 40 CFR 761.3.

9. "Soil" means unconsolidated earth material composing the superficial geologic strata (material overlying bedrock), consisting of clay, silt, sand, or gravel size particles as classified by the U.S. Natural Resources Conservation Service, or a mixture of such materials with liquids, sludges or solids which is inseparable by simple mechanical removal processes and is made up primarily of soil by volume based on visual inspection. Any deliberate mixing of prohibited hazardous waste with soil that changes its treatment classification (i.e., from waste to contaminated soil) is not allowed under the dilution prohibition in subparagraph (c) of this paragraph.

10. "Underlying hazardous constituent" means any constituent listed in subparagraph (3)(i) of this rule, Table UTS-Universal Treatment Standards, except fluoride, selenium, sulfides, vanadium and zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste at a concentration above the constituent-specific UTS treatment standards.

11. "Wastewaters" are wastes that contain less than 1% by weight total organic carbon (TOC) and less that 1% by weight total suspended solids (TSS).

12. All other terms have the meanings given under Rules 0400-12-01-.01(2)(a), .02(1)(b), or .02(1)(c).

(c) Dilution prohibited as a Substitute for Treatment [40 CFR 268.3]

1. Except as provided in part 2 of this subparagraph, no generator, transporter, handler, or owner or operator of a treatment, storage, or disposal facility shall in any way dilute a restricted waste or the residual from treatment of a restricted waste as a substitute for adequate treatment to achieve compliance with paragraph (3) of this rule, to circumvent the effective date of a prohibition in paragraph (2) of this rule, to otherwise avoid a

prohibition in paragraph (2) of this rule, or to circumvent a land disposal prohibition imposed by T.C.A. §68-212-107(d)9.

2. Dilution of wastes that are hazardous only because they exhibit a characteristic in treatment systems which include land-based units which treat wastes subsequently discharged to a water of the United States pursuant to a permit issued under section 402 of the Clean Water Act (CWA), or which treat wastes in a CWA-equivalent treatment system, or which treat wastes for the purposes of pretreatment requirements under section 307 of the CWA is not impermissible dilution for purposes of this subparagraph unless a method other than DEACT has been specified in subparagraph (3)(a) of this rule as the treatment standard, or unless the waste is a D003 reactive cyanide wastewater or nonwastewater.

3. Combustion of the hazardous waste codes listed in Appendix XI of this rule is prohibited, unless the waste, at the point of generation, or after any bona fide treatment such as cyanide destruction prior to combustion, can be demonstrated to comply with one or more of the following criteria (unless otherwise specifically prohibited from combustion):

   (i) The waste contains hazardous organic constituents or cyanide at levels exceeding the constituent-specific treatment standard found in subparagraph (3)(i) of this rule;

   (ii) The waste consists of organic, debris-like materials (e.g., wood, paper, plastic, or cloth) contaminated with an inorganic metal-bearing hazardous waste;

   (iii) The waste, at point of generation, has reasonable heating value such as greater than or equal to 5000 BTU per pound;

   (iv) The waste is co-generated with wastes for which combustion is a required method of treatment;

   (v) The waste is subject to State and/or Federal requirements necessitating reduction of organics (including biological agents); or

   (vi) The waste contains greater than 1% Total Organic Carbon (TOC).

4. It is a form of impermissible dilution, and therefore prohibited, to add iron filings or other metallic forms of iron to lead-containing hazardous wastes in order to achieve any land disposal restriction treatment standard for lead. Lead-containing wastes include D008 wastes (wastes exhibiting a characteristic due to the presence of lead), all characteristic wastes containing lead as an underlying hazardous constituent, listed wastes containing lead as a regulated constituent, and hazardous media containing any of the aforementioned lead-containing wastes.

(d) Treatment Surface Impoundment Exemption [40 CFR 268.4]

1. Wastes which are otherwise prohibited from land disposal under this rule may be treated in a surface impoundment or series of impoundments provided that:

   (i) Treatment of such wastes occurs in the impoundments;

   (ii) The following conditions are met:

      (I) Sampling and testing

      For wastes with treatment standards in paragraph (3) of this rule and/or prohibition levels in paragraph (2) of this rule or federal RCRA section 3004(d), the residues from treatment are analyzed, as specified in subparagraph (g) of this paragraph or subparagraph (2)(c) of this rule, to determine if they meet the applicable treatment standards or where no treatment standards have been established for the waste, the applicable

prohibition levels. The sampling method, specified in the waste analysis plan under Rule 0400-12-01-.05(2)(d) or .06(2)(d), must be designed such that representative samples of the sludge and the supernatant are tested separately rather than mixed to form homogeneous samples.

(II) Removal

The following treatment residues (including any liquid waste) must be removed at least annually: residues which do not meet the treatment standards promulgated under paragraph (3) of this rule; residues which do not meet the prohibition levels established under paragraph (2) of this rule or imposed by statute (where no treatment standards have been established); residues which are from the treatment of wastes prohibited from land disposal under paragraph (2) of this rule (where no treatment standards have been established and no prohibition levels apply); or residues from managing listed wastes which are not delisted under Rule 0400-12-01-.01(3)(c). If the volume of liquid flowing through the impoundment or series of impoundments annually is greater than the volume of the impoundment or impoundments, this flow-through constitutes removal of the supernatant for the purpose of this requirement.

(III) Subsequent management

Treatment residues may not be placed in any other surface impoundment for subsequent management.

(IV) Recordkeeping

Sampling and testing and recordkeeping provisions of Rules 0400-12-01-.06(2)(d) and .05(2)(d);

(iii) The impoundment meets the design requirements of Rule 0400-12-01-.05(11)(b)1 or .06(11)(b)3, regardless that the unit may not be new, expanded, or a replacement, and be in compliance with applicable ground water monitoring requirements of Rules 0400-12-01-.05(6) or .06(6) unless:

(I) Exempted pursuant to Rule 0400-12-01-.06(11)(b)4 or 5 or to Rule 0400-12-01-.05(11)(b)3 or 4; or

(II) Upon application by the owner or operator, the Commissioner, after notice has been given by the owner or operator, as provided for in Rule 0400-12-01-.07(7)(e) and as prepared and required by the Commissioner (the owner or operator has provided proof of the completion of all notice requirements to the Commissioner within ten (10) days following conclusion of the public notice procedures), and an opportunity to comment, has granted a waiver of the requirements on the basis that the surface impoundment:

I. Has at least one liner, for which there is no evidence that such liner is leaking;

II. Is located more than one-quarter mile from an underground source of drinking water; and

III. Is in compliance with generally applicable ground water monitoring requirements for facilities with permits; or

(III) Upon application by the owner or operator, the Commissioner, after public notice as set forth in item (II) of this subpart, and an opportunity to comment, has granted a modification to the requirements on the basis of

a demonstration that the surface impoundment is located, designed, and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time; and

(iv) The owner or operator submits to the Commissioner a written certification that the requirements of subpart (iii) of this part have been met. The following certification is required:

"I certify under penalty of law that the requirements of Rule 0400-12-01-.10(1)(d)1(iii) have been met for all surface impoundments being used to treat restricted wastes. I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

2. Evaporation of hazardous constituents as the principal means of treatment is not considered to be treatment for purposes of an exemption under this subparagraph.

(e) (Reserved) [40 CFR 268.5]

(Note: The authority for implementing 40 CFR 268.5 Procedures for Case-by-Case Extensions to an Effective Date remains with the U.S. Environmental Protection Agency.)

(f) (Reserved) [40 CFR 268.6]

(Note: The authority for implementing 40 CFR 268.6 Petitions to Allow Land Disposal of a Prohibited Waste remains with the U.S. Environmental Protection Agency.)

(g) Testing, Tracking, and Recordkeeping Requirements for Generators, Treaters, and Disposal Facilities [40 CFR 268.7]

1. Requirements for generators:

(i) A generator of hazardous waste must determine if the waste has to be treated before it can be land disposed. This is done by determining if the hazardous waste meets the treatment standards in subparagraphs (3)(a), (3)(f), or (3)(j) of this rule. This determination can be made concurrently with the hazardous waste determination required in Rule 0400-12-01-.03(1)(b), in either of two ways: testing the waste or using knowledge of the waste. If the generator tests the waste, testing would normally determine the total concentration of hazardous constituents, or the concentration of hazardous constituents in an extract of the waste obtained using test method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, listed in Rule 0400-12-01-.01(2)(b), depending on whether the treatment standard for the waste is expressed as a total concentration or concentration of hazardous constituent in the waste's extract. (Alternatively, the generator must send the waste to a RCRA-permitted hazardous waste treatment facility, where the waste treatment facility must comply with the requirements of subparagraph (2)(d) of Rule 0400-12-01-.06 and part 2 of this subparagraph.) In addition, some hazardous wastes must be treated by particular treatment methods before they can be land disposed and some soils are contaminated by such hazardous wastes. These treatment standards are also found in subparagraph (3)(a) of this rule, and are described in detail in subparagraph (3)(c) of this rule, Table 1. These wastes, and soils contaminated with such wastes, do not need to be tested (however, if they are in a waste mixture, other wastes with concentration level treatment standards would have to be tested). If a generator determines they are managing a waste, or soil contaminated with a waste, that displays a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity, they must comply with the special requirements of subparagraph (i) of this paragraph in addition to any applicable requirements in this subparagraph.

(ii) If the waste or contaminated soil does not meet the treatment standards or if the generator chooses not to make the determination of whether this must be treated, with the initial shipment of waste to each treatment or storage facility, the generator must send a one-time written notice to each treatment or storage facility receiving the waste, and place a copy in the file. The notice must include the information in column ".10(1)(g)1(ii)" of the Generator Paperwork Requirements Table in subpart (iv) of this part (Alternatively, if the generator chooses not to make the determination of whether the waste must be treated, the notification must include the Hazardous Waste Codes and Manifest Number of the first shipment and must state "This hazardous waste may or may not be subject to the LDR treatment standards. The treatment facility must make the determination.") No further notification is necessary until such time that the waste or facility change, in which case a new notification must be sent and a copy placed in the generator's file.

(I) For contaminated soil, the following certification statement should be included, signed by an authorized representative:

"I certify under penalty of law that I personally have examined this contaminated soil and it [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and requires treatment to meet the soil treatment standards as provided by Rule 0400-12-01-.10(3)(j)3."

(II) (RESERVED)

(iii) If the waste or contaminated soil meets the treatment standard at the original point of generation:

(I) With the initial shipment of waste to each treatment, storage, or disposal facility, the generator must send a one-time written notice to each treatment, storage, or disposal facility receiving the waste, and place a copy in the file. The notice must include the information indicated in column ".10(1)(g)1(iii)" of the Generator Paperwork Requirements Table in .10(1)(g)1(iv) and the following certification statement, signed by an authorized representative:

"I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in Rule 0400-12-01-.10(3). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment."

(II) For contaminated soil, with the initial shipment of wastes to each treatment, storage, or disposal facility, the generator must send a one-time written notice to each facility receiving the waste and place a copy in the file. The notice must include the information in column .10(1)(g)1(iii) of the Generator Paperwork Requirements Table in subpart (iv) of this part.

(III) If the waste changes, the generator must send a new notice and certification to the receiving facility, and place a copy in their files. Generators of hazardous debris excluded from the definition of hazardous waste under part (1)(c)6 of Rule 0400-12-01-.02 are not subject to these requirements.

(iv) For reporting, tracking and recordkeeping when exceptions allow certain wastes or contaminated soil that do not meet the treatment standards to be land disposed: There are certain exemptions from the requirement that hazardous

wastes or contaminated soil meet treatment standards before they can be land disposed. These include, but are not limited to case-by-case extensions under subparagraph (e) of this paragraph, disposal in a no-migration unit under subparagraph (f) of this paragraph, or a national capacity variance or case-by-case capacity variance under paragraph (2) of this rule. If a generator's waste is so exempt, then with the initial shipment of waste, the generator must send a one-time written notice to each land disposal facility receiving the waste. The notice must include the information indicated in column ".10(1)(g)1(iv)" of the Generator Paperwork Requirements Table below. If the waste changes, the generator must send a new notice to the receiving facility, and place a copy in their files.

Generator Paperwork Requirements Table

Required information	.10(1)(g)1(ii)	.10(1)(g)1(iii)	.10(1)(g)1(iv)	.10(1)(g)1(ix)
1. Hazardous Waste Code(s) and Manifest Number of first shipment.	√	√	√	√
2. Statement: this waste is not prohibited from land disposal.			√	
3. The waste is subject to the LDRs. The constituents of concern for F001-F005 and F039, and underlying hazardous constituents in characteristic wastes, unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the LDR notice.	√	√		
4. The notice must include the applicable wastewater/nonwastewater category (see parts (b)7 and 11 of this paragraph and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide).	√	√		
5. Waste analysis data (when available).	√	√	√	
6. Date the waste is subject to the prohibition.			√	
7. For hazardous debris, when treating with the alternative treatment technologies provided by subparagraph (3)(f) of this rule: the contaminants subject to treatment, as described in part (3)(f)2 of this rule; and an indication that these contaminants are being treated to comply with subparagraph (3)(f) of this rule.	√		√	
8. For contaminated soil subject to LDRs as provided in part (3)(j)1 of this rule, the constituents subject to				

treatment as described in part (3)(j)4 of this rule, and the following statement: This contaminated soil [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and [is subject to/complies with] the soil treatment standards as provided by part (3)(j)3 of this rule or the universal treatment standards.	√	√		
9. A certification is needed (see applicable subpart for exact wording).		√		√

(v) If a generator is managing and treating prohibited waste or contaminated soil in tanks, containers, or containment buildings regulated under Rule 0400-12-01-.03(4)(e) to meet applicable LDR treatment standards found at subparagraph (3)(a) of this rule, the generator must develop and follow a written waste analysis plan which describes the procedures they will carry out to comply with the treatment standards. (Generators treating hazardous debris under the alternative treatment standards of Table 1, subparagraph (3)(f) of this rule, however, are not subject to these waste analysis requirements.) The plan must be kept on site in the generator's records, and the following requirements must be met:

(I) The waste analysis plan must be based on a detailed chemical and physical analysis of a representative sample of the prohibited waste(s) being treated, and contain all information necessary to treat the waste(s) in accordance with the requirements of this rule, including the selected testing frequency.

(II) Such plan must be kept in the facility's on-site files and made available to inspectors.

(III) Wastes shipped off-site pursuant to this subpart must comply with the notification requirements of subpart (iii) of this part.

(vi) If a generator determines that the waste or contaminated soil is restricted based solely on his knowledge of the waste, all supporting data used to make this determination must be retained on-site in the generator's files. If a generator determines that the waste is restricted based on testing this waste or an extract developed using the test method 1311 in "Test Methods for Evaluating Solid waste, Physical/Chemical Methods," EPA Publication SW-846, listed in Rule 0400-12-01-.01(2)(b) of this rule, and all waste analysis data must be retained on-site in the generator's files.

(vii) If a generator determines that he is managing a prohibited waste that is excluded from the definition of hazardous or solid waste or is exempted from regulation under Rule 0400-12-01-.02(1)(b) through (f) subsequent to the point of generation (including deactivated characteristic hazardous wastes managed in wastewater treatment systems subject to the Clean Water Act (CWA) as specified at Rule 0400-12-01-.02(1)(d)1(ii) or that are CWA- equivalent or are managed in an underground injection well regulated by the SDWA), he must place a one-time notice describing such generation, subsequent exclusion from the definition of hazardous or solid waste or exemption from regulation under Chapter 0400-12-01, and the disposition of the waste, in the facility's on-site files.

(viii) Generators must retain on-site a copy of all notices, certifications, waste analysis data, and other documentation produced pursuant to this subparagraph for at least three years from the date that the waste that is the subject of such documentation was last sent to on-site or off-site treatment, storage, or disposal. The three year record retention period is automatically extended during the

course of any unresolved enforcement action regarding the regulated activity or as requested by the Commissioner. The requirements of this subpart apply to solid wastes even when the hazardous characteristic is removed prior to disposal, or when the waste is excluded from the definition of hazardous or solid waste under Rule 0400-12-01-.02(1)(b) through (f), or exempted from regulation under the Act, subsequent to the point of generation.

(ix) If a generator is managing a lab pack containing hazardous wastes and wishes to use the alternative treatment standard for lab packs found at part (3)(c)3 of this rule:

(I) With the initial shipment of waste to a treatment facility, the generator must submit a notice that provides the information in column ".10(1)(g)1(ix)" in the Generator Paperwork Requirements Table of subpart (iv) of this part, and the following certification. The certification, which must be signed by an authorized representative and must be placed in the generator's files, must say the following:

"I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack contains only wastes that have not been excluded under Appendix IV to Rule 0400-12-01-.10 and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at Rule 0400-12-01-.10(3)(c)3. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment."

(II) No further notification is necessary until such time that the wastes in the lab pack change, or the receiving facility changes, in which case a new notice and certification must be sent and a copy placed in the generator's file.

(III) If the lab pack contains characteristic hazardous wastes (D001--D043), underlying hazardous constituents (as defined in part (b)10 of this paragraph) need not be determined.

(IV) The generator must also comply with the requirements in subparts (vi) and (vii) of this part.

(x) Small quantity generators with tolling agreements pursuant to Rule 0400-12-01-.03(3)(a)5 must comply with the applicable notification and certification requirements of this part for the initial shipment of the waste subject to the agreement. Such generators must retain on-site a copy of the notification and certification, together with the tolling agreement, for at least three years after termination or expiration of the agreement. The three-year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Commissioner.

2. Treatment facilities must test their wastes according to the frequency specified in their waste analysis plans as required by Rule 0400-12-01-.06(2)(d) (for permitted TSDFs) or Rule 0400-12-01-.05(2)(d) (for interim status facilities). Such testing must be performed as provided in subparts (i), (ii) and (iii) of this part.

(i) For wastes or contaminated soil with treatment standards expressed in the waste extract (TCLP), the owner or operator of the treatment facility must test an extract of the treatment residues, using test method 1311 (the Toxicity Characteristic Leaching Procedure, described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 listed in Rule 0400-12-01-.01(2)(b)), to assure that the treatment residues extract meet the applicable treatment standards.

(ii) For wastes or contaminated soil with treatment standards expressed as concentrations in the waste, the owner or operator of the treatment facility must test the treatment residues (not an extract of such residues) to assure that they meet the applicable treatment standards.

(iii) A one-time notice must be sent with the initial shipment of waste or contaminated soil to the land disposal facility. A copy of the notice must be placed in the treatment facility's file.

(I) No further notification is necessary until such time that the waste or receiving facility change, in which case a new notice must be sent and a copy placed in the treatment facility's file.

(II) The one-time notice must include these requirements:

Treatment Facility Paperwork Requirements Table

Required information	.10(1)(g)2
1. Hazardous Waste Code(s) and Manifest Number of first shipment.	√
2. The waste is subject to the LDRs. The constituents of concern for F001-F005, and F039, and underlying hazardous constituents in characteristic wastes, unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the LDR notice.	√
3. The notice must include the applicable wastewater/nonwastewater category (see parts (b)7 and 11 of this paragraph) and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide).	√
4. Waste analysis data (when available).	√
5. For contaminated soil subject to LDRs as provided in part (3)(j)1 of this rule, the constituents subject to treatment as described in part (3)(j)4 of this rule, and the following statement, "this contaminated soil [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and [is subject to/complies with] the soil treatment standards as provided by part (3)(j)3 of this rule."	√
6. A certification is needed (see applicable subpart for exact wording).	√

(iv) The treatment facility must submit a one-time certification signed by an authorized representative with the initial shipment of waste or treatment residue of a restricted waste to the land disposal facility. A certification is also necessary for contaminated soil and it must state:

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that it has been maintained and operated properly so as to comply with the treatment standards specified in Rule 0400-12-01-.10(3)(j) without impermissible dilution of the prohibited waste. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

(I) A copy of the certification must be placed in the treatment facility's on-site files. If the waste or treatment residue changes, or the receiving facility changes, a new certification must be sent to the receiving facility, and a copy placed in the file.

(II) Debris excluded from the definition of hazardous waste under Rule 0400-12-01-.02(1)(c)6 (i.e., debris treated by an extraction or destruction technology provided by Table 1, subparagraph (3)(f) of this rule, and debris that the Commissioner has determined does not contain hazardous waste), however, is subject to the notification and certification requirements of part 4 of this subparagraph rather than the certification requirements of this subpart.

(III) For wastes with organic constituents having treatment standards expressed as concentration levels, if compliance with the treatment standards is based in whole or in part on the analytical detection limit alternative specified in part (3)(a)4 of this rule, the certification, signed by an authorized representative, must state the following:

"I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion units as specified in Rule 0400-12-01-.10(3)(c), Table 1. I have been unable to detect the nonwastewater organic constituents, despite having used best good-faith efforts to analyze for such constituents. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

(IV) For characteristic wastes that are subject to the treatment standards in subparagraph (3)(a) of this rule (other than those expressed as a method of treatment) or subparagraph (3)(j) of this rule and that contain underlying hazardous constituents as defined in part (b)10 of this paragraph; if these wastes are treated on-site to remove the hazardous characteristic; and are then sent off-site for treatment of underlying hazardous constituents, the certification must state the following:

"I certify under penalty of law that the waste has been treated in accordance with the requirements of Rule 0400-12-01-.10(3)(a) or Rule 0400-12-01-.10(3)(j) to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

(V) For characteristic wastes that contain underlying hazardous constituents as defined in part (b)10 of this paragraph that are treated on-site to remove the hazardous characteristic and to treat underlying hazardous constituents to levels in subparagraph (3)(i) of this rule Universal Treatment Standards, the certification must state the following:

"I certify under penalty of law that the waste has been treated in accordance with the requirements of Rule 0400-12-01-.10(3)(a) to remove the hazardous characteristic, and that underlying hazardous constituents, as defined in Rule 0400-12-01-.10(1)(b)10, have been treated on-site to meet the Rule 0400-12-01-.10(3)(i) Universal Treatment Standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

(v) If the waste or treatment residue will be further managed at a different treatment, storage, or disposal facility, the treatment, storage, or disposal facility sending the waste or treatment residue off-site must comply with the notice and certification requirements applicable to generators under this subparagraph.

(vi) Where the wastes are recyclable materials used in a manner constituting disposal subject to the provisions of Rule 0400-12-01-.09(3)(a)2 regarding treatment standards and prohibition levels, the owner or operator of a treatment facility (i.e., the recycler) must for the initial shipment of waste, prepare a one time certification described in subpart (iv) of this part, and a one time notice which includes the information in subpart (iii) of this part (except the manifest number). The certification and notification must be placed in the facilitiy's on-site files. If the waste or the receiving faciliy changes, a new certification and notification must be prepared and placed in the on-site files. In addition, the recycling facility must also keep records of the name and location of each entity receiving the hazardous waste-derived product.

3. Except where the owner or operator is disposing of any waste that is a recyclable material used in a manner constituting disposal pursuant to Rule 0400-12-01-.09(3)(a)2, the owner or operator of any land disposal facility disposing any waste subject to restrictions under this part must:

(i) Have copies of the notice and certifications specified in part 1 or 2 of this subparagraph.

(ii) Test the waste, or an extract of the waste or treatment residue developed using the test method 1311 (the Toxicity Characteristic Leaching Procedure), described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 listed in Rule 0400-12-01-.01(2)(b), to assure that the wastes or treatment residues are in compliance with the applicable treatment standards set forth in paragraph (3) of this rule. Such testing must be performed according to the frequency specified in the facility's waste analysis plan as required by Rule 0400-12-01-.06(2)(d) or Rule 0400-12-01-.05(2)(d).

4. Generators or treaters who first claim that hazardous debris is excluded from the definition of hazardous waste under Rule 0400-12-01-.02(1)(c)6 (i.e., debris treated by an extraction or destruction technology provided by Table 1 of subparagraph (3)(f) of this rule and debris that the Commissioner has determined does not contain hazardous waste) are subject to the following notification and certification requirements:

(i) A one-time notification, including the following information, must be submitted to the Commissioner:

(I) The name and address of the nonhazardous solid waste landfill (Subtitle D) facility receiving the treated debris;

(II) A description of the hazardous debris as initially generated, including the applicable Hazardous Waste Code(s); and

(III) For debris excluded under Rule 0400-12-01-.02(1)(c)6, the technology from Table 1 of subparagraph (3)(f) of this rule used to treat the debris.

(ii) The notification must be updated if the debris is shipped to a different facility, and, for debris excluded under Rule 0400-12-01-.02(1)(c)6(i), if a different type of debris is treated or if a different technology is used to treat the debris.

(iii) For debris excluded under Rule 0400-12-01-.02(1)(c)6, the owner or operator of the treatment facility must document and certify compliance with the treatment standards in Table 1 of subparagraph (3)(f) of this rule as follows:

(I) Records must be kept of all inspections, evaluations, and analyses of treated debris that are made to determine compliance with the treatment standards;

(II) Records must be kept of any data or information the treater obtains during treatment of the debris that identifies key operating parameters of the treatment unit; and

(III) For each shipment of treated debris, a certification of compliance with the treatment standards must be signed by an authorized representative and placed in the facility's files. The certification must state the following:

"I certify under penalty of law that the debris has been treated in accordance with the requirements of Rule 0400-12-01-.10(3)(f). I am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment."

5. Generators and treaters who first received from the Commissioner a determination that a given contaminated soil subject to LDRs as provided in part (3)(j)1 of this rule no longer contains a listed hazardous waste and generators and treaters who first determine that a contaminated soil subject to LDRs as provided in part (3)(j)1 of this rule no longer exhibits a characteristic of hazardous waste must:

(i) Prepare a one-time only documentation of these determinations including all supporting information; and,

(ii) Maintain that information in the facility files and other records for a minimum of three years.

(h) (RESERVED) [40 CFR 268.8]

(i) Special Rules Regarding Wastes That Exhibit a Characteristic [40 CFR 268.9]

1. The initial generator of a solid waste must determine each Hazardous Waste Number (waste code) applicable to the waste in order to determine the applicable treatment standards under paragraph (3) of this rule. This determination may be made concurrently with the hazardous waste determination requied in subparagraph (1)(b) of Rule 0400-12-01-.03. For purposes of this rule, the waste will carry the waste code for any applicable listed waste (Rule 0400-12-01-.02(4)). In addition, where the waste exhibits a characteristic, the waste will carry one or more of the characteristic waste codes (Rule 0400-12-01-.02(3)), except when the treatment standard for the listed waste operates in lieu of the treatment standard for the characteristic waste, as specified in part 2 of this subparagraph. If the generator determines that their waste displays a hazardous characteristic (and is not D001 nonwastewaters treated by CMBST, RORGS, OR POLYM of subparagraph (3)(c) of this rule, Table 1), the generator must determine the underlying hazardous constituents (as defined at part (b)10 of this paragraph) in the characteristic waste.

2. Where a prohibited waste is both listed under Rule 0400-12-01-.02(4) and exhibits a characteristic under Rule 0400-12-01-.02(3), the treatment standard for the waste code listed in Rule 0400-12-01-.02(4) will operate in lieu of the standard for the waste code under Rule 0400-12-01-.02(3), provided that the treatment standard for the listed waste includes a treatment standard for the constituent that causes the waste to exhibit the characteristic. Otherwise, the waste must meet the treatment standards for all applicable listed and characteristic waste codes.

3. In addition to any applicable standards determined from the initial point of generation, no prohibited waste which exhibits a characteristic under Rule 0400-12-01-.02(3) may be land disposed unless the waste complies with the treatment standards under paragraph (3) of this rule.

4. Wastes that exhibit a characteristic are also subject to subparagraph (g) of this paragraph requirements, except that once the waste is no longer hazardous, a one-time notification and certification must be placed in the generator's or treater's on-site files. The notification and certification must be updated if the process or operation generating the

waste changes and/or if the nonhazardous solid waste landfill (Subtitle D) facility receiving the waste changes.

(i) The notification must include the following information:

(I) Name and address of the nonhazardous solid waste landfill (Subtitle D) facility receiving the waste shipment; and

(II) A description of the waste as initially generated, including the applicable Hazardous Waste Code(s), treatability group(s), and underlying hazardous constituents (as defined in part (b)10 of this paragraph), unless the waste will be treated and monitored for all underlying hazardous constituents. If all underlying hazardous constituents will be treated and monitored, there is no requirement to list any of the underlying hazardous constituents on the notice.

(ii) The certification must be signed by an authorized representative and must state the language found in subpart (g)2(iv) of this paragraph.

(I) If treatment removes the characteristic but does not meet standards applicable to underlying hazardous constituents, then the certification found in item (g)2(iv)(IV) of this paragraph applies.

(II) (RESERVED)

(j) (RESERVED) [40 CFR 268.10]

(k) (RESERVED) [40 CFR 268.11]

(l) (RESERVED) [40 CFR 268.12]

(m) (Reserved) [40 CFR 268.13]

(Note: The authority for implementing 40 CFR 268.13 Schedule for Wastes Identified or Listed after November 8, 1984 remains with the U.S. Environmental Protection Agency.)

(n) Surface Impoundment Exemptions [40 CFR 268.14]

1. This subparagraph defines additional circumstances under which an otherwise prohibited waste may continue to be placed in a surface impoundment.

2. Wastes which are newly identified or listed pursuant to Tennessee Code Annotated (T.C.A.) §§68-212-106 and 107 and stored in a surface impoundment that is newly subject to Chapter 0400-12-01 as a result of the additional identification or listing, may continue to be stored in the surface impoundment for 48 months after the promulgation of the additional listing or characteristic, notwithstanding that the waste is otherwise prohibited from land disposal, provided that the surface impoundment is in compliance with the requirements of Rule 0400-12-01-.05(6) within 12 months after promulgation of the new listing or characteristic.

3. Wastes which are newly identified or listed pursuant to Tennessee Code Annotated (T.C.A.) §§68-212-106 and 107, and treated in a surface impoundment that is newly subject to Chapter 0400-12-01 as a result of the additional identification or listing, may continue to be treated in that surface impoundment, notwithstanding that the waste is otherwise prohibited from land disposal, provided that surface impoundment is in compliance with the requirements of Rule 0400-12-01-.05(6) within 12 months after the promulgation of the new listing or characteristic. In addition, if the surface impoundment continues to treat hazardous waste after 48 months from promulgation of the additional listing or characteristic, it must then be in compliance with subparagraph (d) of this paragraph.

(2) Prohibitions on Land Disposal [40 CFR 268 Subpart C]

(a) Waste Specific Prohibitions -- Wood Preserving Wastes [40 CFR 268.30]

1. Effective September 12. 1998, the following wastes are prohibited from land disposal: the wastes specified in Rule 0400-12-01-.02 as Hazardous Waste codes F032, F034, and F035.

2. Effective May 12, 1999, the following wastes are prohibited from land disposal: soil and debris contaminated with F032, F034, F035; and radioactive wastes mixed with Hazardous waste codes F032, F034, and F035.

3. Between September 12, 1998 and May 12, 1999, soil and debris contaminated with F032, F034, F035; and radioactive waste mixed with F032, F034, and F035 may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in subparagraph (1)(e) of this rule.

4. The requirements of parts 1 and 2 of this subparagraph do not apply if:

(i) The wastes meet the applicable treatment standards specified in paragraph (3) of this rule;

(ii) Persons have been granted an exemption from a prohibition pursuant to a petition under subparagraph (1)(f) of this rule, with respect to those wastes and units covered by the petition;

(iii) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under subparagraph (3)(e) of this rule; or

(iv) Persons have been granted an extension to the effective date of a prohibition pursuant to subparagraph (1)(e) of this rule, with respect to those wastes covered by the extension.

5. To determine whether a hazardous waste identified in this subparagraph exceeds the applicable treatment standards specified in subparagraph (3)(a) of this rule, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Universal Treatment Standard levels of subparagraph (3)(i) of this rule, the waste is prohibited from land disposal, and all requirements of this rule are applicable, except as otherwise specified.

(b) Waste Specific Prohibitions -- Dioxin-Containing Wastes [40 CFR 268.31]

1. The dioxin-containing wastes specified in Rule 0400-12-01-.02(4)(b) as Hazardous Waste Codes F020, F02l, F022, F023, F026, F027, and F028, are prohibited from land disposal unless the following condition applies:

(i) The F020--F023 and F026--F028 dioxin-containing waste is contaminated soil and debris resulting from a response action taken under section 104 or 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) or a corrective action taken under subtitle C of the Resource Conservation and Recovery Act (RCRA) or the Tennessee Hazardous Waste Management Act, as amended, TCA §§68-212-101 et seq.

2. The F020--F023 and F026--F028 dioxin-containing wastes listed in subpart 1(i) of this subparagraph are prohibited from land disposal.

3. (Reserved) [40 CFR 268.31(c)]

(Note: The authority for implementing 40 CFR 268.31(c) pertaining to land disposal between November 8, 1988 and November 8, 1990 of the F020--F023 and F026--F028 dioxin-containing waste which is contaminated soil and debris resulting from a response action under CERCLA or a corrective action under RCRA remains with the U.S. Environmental Protection Agency.)

4. The requirements of parts 1 and 2 of this subparagraph do not apply if:

   (i) The wastes meet the standards of paragraph (3) of this rule; or

   (ii) Persons have been granted an exemption from a prohibition pursuant to a petition under subparagraph (1)(f) of this rule, with respect to those wastes and units covered by the petition; or

   (iii) Persons have been granted an extension to the effective date of a prohibition pursuant to subparagraph (1)(e) of this rule, with respect to those wastes covered by the extension.

(c) Waste specific prohibitions – Soils exhibiting the toxicity characteristic for metals and containing PCBs [40 CFR 268.32]

1. The following wastes are prohibited from land disposal: any volumes of soil exhibiting the toxicity characteristic solely because of the presence of metals (D004--D011) and containing PCBs.

2. The requirements of part 1 of this subparagraph do not apply if:

   (i) (I) The wastes contain halogenated organic compounds in total concentration less than 1, 000 mg/kg; and

   (II) The wastes meet the treatment standards specified in paragraph (3) of this rule for Hazardous Waste Codes D004--D011, as applicable; or

   (ii) (I) The wastes contain halogenated organic compounds in total concentration less than 1,000 mg/kg; and

   (II) The wastes meet the alternative treatment standards specified in subparagraph (3)(j) of this rule for contaminated soil; or

   (iii) Persons have been granted an exemption from a prohibition pursuant to a petition under subparagraph (1)(f) of this rule with respect to those wastes and units covered by the petition; or

   (iv) The wastes meet applicable alternative treatment standards established pursuant to a petition granted under subparagraph (3)(e) of this rule.

(d) Waste Specific Prohibitions-Chlorinated Aliphatic Wastes [40 CFR 268.33]

1. Effective July 22, 2002 the wastes specified in Rule 0400-12-01-.02 as Hazardous Waste Codes K174 and K175, soil and debris contaminated with these wastes, radioactive wastes mixed with these wastes, and soil and debris contaminated with radioactive wastes mixed with these wastes are prohibited from land disposal.

2. The requirement of part 1 of this subparagraph do not apply if:

   (i) The wastes meet the applicable treatment standards specified in paragraph (3) of this rule;

   (ii) Persons have been granted an exemption from a prohibition pursuant to a petition under subparagraph (1)(f) of this rule, with respect to those wastes and units covered by the petition;

(iii) The wastes meet the applicable treatment standards established pursuant to a petition granted under subparagraph (3)(e) of this rule;

(iv) Hazardous debris has met the treatment standards in subparagraph (3)(a) of this rule or the alternative treatment standards in subparagraph (3)(f) of this rule; or

(v) Persons have been granted an extension to the effective date of a prohibition pursuant to subparagraph (1)(e) of this rule, with respect to these wastes covered by the extension.

3. To determine whether a hazardous waste identified in this subparagraph exceeds the applicable treatment standards specified in subparagraph (3)(a) of this rule, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains regulated constituents in excess of the applicable levels of paragraph (3) of this rule, the waste is prohibited from land disposal, and all requirements of this rule are applicable, except as otherwise specified.

4. Disposal of K175 wastes that have complied with all applicable treatment standards of subparagraph (3)(a) of this rule must also be macroencapsulated in accordance with Table 1 of subparagraph (3)(f) of this rule unless the waste is placed in:

(i) A hazardous waste (Subtitle C) monofill containing only K175 wastes that meet all applicable treatment standards of subparagraph (3)(a) of this rule; or

(ii) A dedicated hazardous waste (Subtitle C) landfill cell in which all other wastes being co-disposed are at pH $\leq$ 6.0.

(e) Waste Specific Prohibitions - Toxicity Characteristic Metal Wastes [40 CFR 268.34]

1. Effective July 19, 1999, the following wastes are prohibited from land disposal: the wastes specified in Rule 0400-12-01-.02 as Hazardous Waste Codes D004--D011 that are newly identified (i.e., wastes, soil, or debris identified as hazardous by the Toxicity Characteristic Leaching Procedure but not the Extraction Procedure), and waste, soil, or debris from mineral processing operations that is identified as hazardous by the specifications at Rule 0400-12-01-.02.

2. Effective July 19, 1999, the following waste is prohibited from land disposal: Slag from secondary lead smelting which exhibits the Toxicity Characteristic due to the presence of one or more metals.

3. Effective May 26, 2000, the following wastes are prohibited from land disposal: newly identified characteristic wastes from elemental phosphorus processing; radioactive wastes mixed with hazardous wastes D004--D011 that are newly identified (i.e., wastes, soil, or debris identified as hazardous by the Toxicity Characteristic Leaching Procedure but not the Extraction Procedure); or mixed with newly identified characteristic mineral processing wastes, soil, or debris.

4. Between July 19, 1999 and May 26, 2000, newly identified characteristic wastes from elemental phosphorus processing, radioactive waste mixed with D004--D011 wastes that are newly identified (i.e. wastes, soil, or debris identified as hazardous by the Toxicity Characteristic Leaching Procedure but not the Extraction Procedure), or mixed with newly identified characteristic mineral processing wastes, soil, or debris may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in subparagraph (1)(e) of this rule.

5. The requirements of parts 1 and 3 of this subparagraph do not apply if:

(i) The wastes meet the applicable treatment standards specified in paragraph (3) of this rule;

(ii) Persons have been granted an exemption from a prohibition pursuant to a petition under subparagraph (1)(f) of this rule, with respect to those wastes and units covered by the petition;

(iii) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under subparagraph (3)(e) of this rule; or

(iv) Persons have been granted an extension to the effective date of a prohibition pursuant to subparagraph (1)(e) of this rule, with respect to these wastes covered by the extension.

6. To determine whether a hazardous waste identified in this subparagraph exceeds the applicable treatment standards specified in subparagraph (3)(a) of this rule, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents (including underlying hazardous constituents in characteristic wastes) in excess of the applicable Universal Treatment Standard levels of subparagraph (3)(i) of this rule, the waste is prohibited from land disposal, and all requirements of this rule are applicable, except as otherwise specified.

(f) Waste Specific Prohibitions-Petroleum Refining Wastes [40 CFR 268.35]

1. Effective November 28, 2000, the wastes specified in Rule 0400-12-01-.02 as Hazardous Wastes Codes K169, K170, K171, and K172, soils and debris contaminated with these wastes, radioactive wastes mixed with these hazardous wastes, and soils and debris contaminated with these radioactive mixed wastes, are prohibited from land disposal.

2. The requirements of part 1 of this subparagraph do not apply if:

(i) The wastes meet the applicable treatment standards specified in paragraph (3) of this rule;

(ii) Persons have been granted an exemption from a prohibition pursuant to a petition under subparagraph (1)(f) of this rule, with respect to those wastes and units covered by the petition;

(iii) The wastes meet the applicable treatment standards established pursuant to a petition granted under subparagraph (3)(e) of this rule;

(iv) Hazardous debris that have met treatment standards in subparagraph (3)(a) of this rule or in the alternative treatment standards in subparagraph (3)(f) of this rule; or

(v) Persons have been granted an extension to the effective date of a prohibition pursuant to subparagraph (1)(e) of this rule, with respect to these wastes covered by the extension.

3. To determine whether a hazardous waste identified in this subparagraph exceeds the applicable treatment standards specified in subparagraph (3)(a) of this rule, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Universal Treatment Standard levels of subparagraph (3)(i) of this rule, the waste is prohibited from land disposal, and all requirements of this rule are applicable, except as otherwise specified.

(g) Waste Specific Prohibitions—Inorganic Chemical Wastes [40 CFR 268.36]

1. Effective January 12, 2004, the wastes specified in Rule 0400-12-01-.02 as Hazardous Wastes codes K176, K 177, and K178, and soil and debris contaminated with these wastes, radioactive wastes mixed with these wastes, and soil and debris contaminated with radioactive wastes mixed with these wastes are prohibited from land disposal.

2. The requirements of part 1 of this subparagraph do not apply if:

   (i) The wastes meet the applicable treatment standards specified in paragraph (3) of this rule;

   (ii) Persons have been granted an exemption from a prohibition pursuant to a petition under subparagraph (1)(f) of this rule, with respect to those wastes and units covered by the petition;

   (iii) The wastes meet the applicable treatment standards established pursuant to a petition granted under subparagraph (3)(e) of this rule;

   (iv) Hazardous debris has met the treatment standards in subparagraph (3)(a) of this rule or the alternative treatment standards in subparagraph (3)(f) of this rule;

   (v) Persons have been granted an extension to the effective date of a prohibition pursuant to subparagraph (1)(e) of this rule, with respect to these wastes covered by the extension.

3. To determine whether a hazardous waste identified in this subparagraph exceeds the applicable treatment standards specified in subparagraph (3)(a) of this rule, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains regulated constituents in excess of the applicable levels of paragraph (3) of this rule, the waste is prohibited from land disposal, and all requirements of this part are applicable, except as otherwise specified.

(h) Waste Specific Prohibitions-Ignitable and Corrosive Characteristic Wastes Whose Treatment Standards Were Vacated [40 CFR 268.37]

1. The wastes specified in Rule 0400-12-01-.02(3)(b) as D001 (and is not in the High TOC Ignitable Liquids Subcategory), and specified in Rule 0400-12-01-.02(3)(c) as D002, that are managed in systems other than those whose discharge is regulated under the Clean Water act (CWA), or that inject in Class I deep wells regulated under the Safe Drinking Water act (SDWA), or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies.

2. The wastes specified in Rule 0400-12-01-.02(3)(b) as D001 (and is not in the High TOC Ignitable Liquids Subcategory), and specified in Rule 0400-12-01-.02(3)(c) as D002, that are managed in systems defined in 40 CFR 144.6(e) and 146.6(e) as Class V injection wells, that do not engage in CWA-equivalent treatment before injection, are prohibited from land disposal.

(i) Waste Specific Prohibitions-Newly Identified Organic Toxicity Characteristic Wastes and Newly Listed Coke By-product and Chlorotoluene Production Wastes [40 CFR 268.38]

1. The wastes specified in Rule 0400-12-01-.02(4)(c) as Hazardous Waste Codes K141, K142, K143, K144, K145, K147, K148, K149, K150, and K151 are prohibited from land disposal. In addition, debris contaminated with Hazardous Waste Codes F037, F038, K107--K112, K117, K118, K123--K126, K131, K132, K136, U328, U353, U359, and soil

and debris contaminated with D012--D043, K141--K145, and K147--K151 are prohibited from land disposal. The following wastes that are specified in Rule 0400-12-01-.02(3)(e) Table 1 as Hazardous Waste Codes: D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043 that are not radioactive, or that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that are zero dischargers that do not engage in CWA-equivalent treatment before ultimate land disposal, or that are injected in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/ sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or better than these technologies.

2. On September 19, 1996, radioactive wastes that are mixed with D018--D043 that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/ sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies. Radioactive wastes mixed with K141--K145, and K147--K151 are also prohibited from land disposal. In addition, soil and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.

3. Between December 19, 1994 and September 19, 1996, the wastes included in part 2 of this subparagraph may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in subparagraph (1)(e) of this rule.

4. The requirements of parts 1, 2, and 3 of this subparagraph do not apply if:

   (i) The wastes meet the applicable treatment standards specified in paragraph (3) of this rule;

   (ii) Persons have been granted an exemption from a prohibition pursuant to a petition under subparagraph (1)(f) of this rule, with respect to those wastes and units covered by the petition;

   (iii) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under subparagraph (3)(e) of this rule;

   (iv) Persons have been granted an extension to the effective date of a prohibition pursuant to subparagraph (1)(e) of this rule, with respect to these wastes covered by the extension.

5. To determine whether a hazardous waste identified in this subparagraph exceeds the applicable treatment standards specified in subparagraph (3)(a) of this rule, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable paragraph (3) of this rule levels, the waste is prohibited from land disposal, and all requirements of this rule are applicable, except as otherwise specified.

(j) Waste Specific Prohibitions--Spent Aluminum Potliners; Reactive; and Carbamate Wastes [40 CFR 268.39]

1. On November 11, 1997, the wastes specified in Rule 0400-12-01-.02(4)(c) as Hazardous Waste Codes K156--K159, and K161; and in Rule 0400-12-01-.02(4)(d) as Hazardous

Waste Codes P127, P128, P185, P188--P192, P194, P196--P199, P201--P205, U271, U278--U280, U364, U367, U372, U373, U387, U389, U394, U395, U404, and U409--U411 are prohibited from land disposal. In addition, soil and debris contaminated with any of these wastes are prohibited from land disposal.

2. On November 11, 1997, the wastes identified in Rule 0400-12-01-.02(3)(d) as D003 that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. This prohibition does not apply to unexploded ordnance and other explosive devices which have been the subject of an emergency response. (Such D003 wastes are prohibited unless they meet the treatment standard of DEACT before land disposal (see subparagraph (3)(a) of this rule)).

3. November 11, 1997, the wastes specified in Rule 0400-12-01-.02(4)(c) as Hazardous Waste Code K088 are prohibited from land disposal. In addition, soil and debris contaminated with these wastes are prohibited from land disposal.

4. On April 8, 1998, radioactive wastes mixed with K088, K156--K159, K161, P127, P128, P185, P188--P192, P194, P196--P199, P201--P205, U271, U278--U280, U364, U367, U372, U373, U387, U389, U394, U395, U404, or U409--U411 are prohibited from land disposal. In addition, soil and debris contaminated with any of these radioactive mixed wastes are prohibited from land disposal.

5. Between November 11, 1997 and April 8, 1998, the wastes included in parts 1, 3, and 4 of this subparagraph may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in subparagraph (1)(e) of this rule.

6. The requirements of parts 1, 2, 3, and 4 of this subparagraph do not apply if:

   (i) The wastes meet the applicable treatment standards specified in paragraph (3) of this rule;

   (ii) Persons have been granted an exemption from a prohibition pursuant to a petition under subparagraph (1)(f) of this rule, with respect to those wastes and units covered by the petition;

   (iii) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under subparagraph (3)(e) of this rule;

   (iv) Persons have been granted an extension to the effective date of a prohibition pursuant to subparagraph (1)(e) of this rule, with respect to these wastes covered by the extension.

7. To determine whether a hazardous waste identified in this subparagraph exceeds the applicable treatment standards specified in subparagraph (3)(a) of this rule, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable paragraph (3) of this rule levels, the waste is prohibited from land disposal, and all requirements of this rule are applicable, except as otherwise specified.

(k) Waste Specific Prohibitions—Dyes and/or Pigments Production Wastes [40 CFR 268.20]

1. Effective August 23, 2005, the waste specified in Rule 0400-12-01-.02 as EPA Hazardous Waste Code K181, and soil and debris contaminated with this waste, radioactive wastes mixed with this waste, and soil and debris contaminated with radioactive wastes mixed with this waste are prohibited from land disposal.

2. The requirements of part 1 of this subparagraph do not apply if:

(i) The wastes meet the applicable treatment standards specified in paragraph (3) of this rule;

(ii) Persons have been granted an exemption from a prohibition pursuant to a petition under subparagraph (1)(f) of this rule, with respect to those wastes and units covered by the petition;

(iii) The wastes meet the applicable treatment standards established pursuant to a petition granted under subparagraph (3)(e) of this rule;

(iv) Hazardous debris has met the treatment standards in subparagraph (3)(a) of this rule or the alternative treatment standards in subparagraph (3)(f) of this rule; or

(v) Persons have been granted an extension to the effective date of a prohibition pursuant to subparagraph (1)(e) of this rule, with respect to these wastes covered by the extension.

3. To determine whether a hazardous waste identified in this subparagraph exceeds the applicable treatment standards specified in subparagraph (3)(a) of this rule, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract of the waste, or the generator may use knowledge of the waste. If the waste contains regulated constituents in excess of the applicable paragraph (3) of this rule levels, the waste is prohibited from land disposal, and all requirements of this rule are applicable, except as otherwise specified.

(l) through (t) (RESERVED) [40 CFR 268.21-268.29]

(3) Treatment Standards [40 CFR 268 Subpart D]

(a) Applicability of Treatment Standards [40 CFR 268.40]

1. A prohibited waste identified in the table "Treatment Standards for Hazardous Wastes" may be land disposed only if it meets the requirements found in the table. For each waste, the table identifies one of three types of treatment standard requirements:

(i) All hazardous constituents in the waste or in the treatment residue must be at or below the values found in the table for that waste ("total waste standards"); or

(ii) The hazardous constituents in the extract of the waste or in the extract of the treatment residue must be at or below the values found in the table ("waste extract standards"); or

(iii) The waste must be treated using the technologies specified in the table ("technology standard"), which are described in detail in Table 1-Technology Codes and Description of Technology-Based Standards in subparagraph (3)(c) of this rule.

2. For wastewaters, compliance with concentration level standards is based on maximums for any one day, except for D004 through D011 wastes for which the previously promulgated treatment standards based on grab samples remain in effect. For all nonwastewaters, compliance with concentration level standards is based on grab sampling. For wastes covered by the waste extract standards, the test Method 1311, the Toxicity Characteristic Leaching Procedure found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, listed in 40 CFR 260.11; Rule 0400-12-01-.01(2)(b)1, must be used to measure compliance. An exception is made for D004 and D008, for which either of two test methods may be used: Method 1311, or Method 1310B, the Extraction Procedure Toxicity Test. For wastes covered by a technology standard, the wastes may be land disposed after being treated using that

specified technology or an equivalent treatment technology approved by the Commissioner under the procedures set forth in part (c)2 of this paragraph.

3. When wastes with differing treatment standards for a constituent of concern are combined for purposes of treatment, the treatment residue must meet the lowest treatment standard for the constituent of concern.

4. Notwithstanding the prohibitions specified in part 1 of this subparagraph, treatment and disposal facilities may demonstrate (and certify pursuant to subpart (1)(g)2(v) of this rule) compliance with the treatment standards for organic constituents specified by a footnote in the table "Treatment Standards for Hazardous Wastes" in this subparagraph, provided the following conditions are satisfied:

   (i) The treatment standards for the organic constituents were established based on incineration in units operated in accordance with the technical requirements of Rule 0400-12-01-.06(15), or based on combustion in fuel substitution units operating in accordance with applicable technical requirements;

   (ii) The treatment or disposal facility has used the methods referenced in subpart (i) of this part to treat the organic constituents; and

   (iii) The treatment or disposal facility may demonstrate compliance with organic constituents if good-faith analytical efforts achieve detection limits for the regulated organic constituents that do not exceed the treatment standards specified in this subparagraph by an order of magnitude.

5. For characteristic wastes (D001--D043) that are subject to treatment standards in the following table "Treatment Standards for Hazardous Wastes" and are not managed in a wastewater treatment system that is regulated under the Clean Water Act (CWA), that is CWA-equivalent, or that is injected into a Class I nonhazardous deep injection well, all underlying hazardous constituents (as defined in part (1)(b)10 of this rule) must meet Universal Treatment Standards, found in subparagraph (i) of this paragraph, "Table Universal Treatment Standards," prior to land disposal as defined in part (1)(b)6 of this rule.

6. The treatment standards for F001--F005 nonwastewater constituents carbon disulfide, cyclohexanone, and/or methanol apply to wastes which contain only one, two, or three of these constituents. Compliance is measured for these constituents in the waste extract from test Method 1311, the Toxicity Characteristic Leaching Procedure found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, listed in 40 CFR 260.11; Rule 0400-12-01-.01(2)(b). If the waste contains any of these three constituents along with any of the other 25 constituents found in F001--F005, then compliance with treatment standards for carbon disulfide, cyclohexanone, and/or methanol are not required.

7. Between August 26, 1996 and March 4, 1999 the treatment standards for the wastes specified in Rule 0400-12-01-.02(4)(c) as Hazardous Waste Codes K156--K161; and in Rule 0400-12-01-.02(4)(d) as Hazardous Waste Codes P127, P128, P185, P188--P192, P194, P196--P199, P201--P205, U271, U277--U280, U364--U367, U372, U373, U375--U379, U381--U387, U389--U396, U400--U404, U407, and U409--U411: and soil contaminated with these wastes; may be satisfied by either meeting the constituent concentrations presented in the table "Treatment Standards for Hazardous Wastes" in this subparagraph, or by treating the waste by the following technologies; combustion, as defined by the technology code CMBST at subparagraph (c) of this paragraph Table 1, for nonwastewaters; and biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at subparagraph (c) of this paragraph Table 1, for wastewaters.

8. Prohibited D004--D011 mixed radioactive wastes and mixed radioactive listed wastes containing metal constituents, that were previously treated by stabilization to the

treatment standards in effect at that time and then put into storage, do not have to be retreated to meet treatment standards in this subparagraph prior to land disposal.

9. [RESERVED] [40 CFR 268.40(i)]

10. Effective November 28, 2000, the treatment standards for the wastes specified in Rule 0400-12-01-.02(4)(d) as Hazardous Waste Codes P185, P191, P192, P197, U364, U394, and U395 may be satisfied by either meeting the constituent concentrations presented in the table "Treatment Standards for Hazardous Wastes" in this subparagraph, or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST at subparagraph (c) Table 1 of this paragraph, for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at subparagraph (c) Table 1 of this paragraph, for wastewaters.

TREATMENT STANDARDS FOR HAZARDOUS WASTES
(Note: Abbreviated rule citations refer to Chapter 0400-12-01.)
(Note. NA means Not Applicable.)

Waste Code	Waste Description and Treatment/Regulatory Subcategory[1]	REGULATED HAZARDOUS CONSTITUENT		WASTE-WATERS	NON-WASTE-WATERS
		Common Name	CAS[2] Number	Concentration[3] in mg/l; Or Technology Code[4]	Concentration[5] in mg/kg unless noted as "mg/l TCLP"; or Technology Code[4]
D001 [9]	Ignitable Characteristic Wastes, except for the Rule 0400-12-01-.02(3)(b)1(i) High TOC Subcategory.	NA	NA	DEACT and meet .10(3)(i) standards[8]; or RORGS; or CMBST	DEACT and meet Rule 0400-12-01-.10(3)(i) standards[8]; or RORGS; or CMBST
	High TOC Ignitable Characteristic Liquids Subcategory based on Rule 0400-12-01-.02(3)(b)1(i) - Greater than or equal to 10% total organic carbon. (Note: This subcategory consists of nonwastewaters only.)	NA	NA	NA	RORGS; CMBST; or POLYM
D002 [9]	Corrosive Characteristic Wastes.	NA	NA	DEACT and meet .10(3)(i) standards[8]	DEACT and meet Rule 0400-12-01-.10(3)(i) standards[8]
D002, D004, D005, D006, D007, D008, D009, D010, D011	Radioactive high level wastes generated during the reprocessing of fuel rods. (Note: This subcategory consists of nonwastewaters only.)	Corrosivity (pH)	NA	NA	HLVIT
		Arsenic	7440-38-2	NA	HLVIT
		Barium	7440-39-3	NA	HLVIT
		Cadmium	7440-43-9	NA	HLVIT
		Chromium (Total)	7440-47-3	NA	HLVIT
		Lead	7439-92-1	NA	HLVIT
		Mercury	7439-97-6	NA	HLVIT

		Selenium	7782-49-2	NA	HLVIT
		Silver	7440-22-4	NA	HLVIT
D003 [9]	Reactive Sulfides Subcategory based on Rule 0400-12-01-.02(3)(d)1(v).	NA	NA	DEACT	DEACT
	Explosives Subcategory based on Rule 0400-12-01-.02(3)(d)1(vi), (vii) and (viii).	NA	NA	DEACT and meet .10(3)(i) standards[8]	DEACT and meet Rule 0400-12-01-.10(3)(i) standards[8]
	Unexploded ordnance and other explosive devices which have been the subject of an emergency response.	NA	NA	DEACT	DEACT
	Other Reactives Subcategory based on Rule 0400-12-01-.02(3)(d)1(i).	NA	NA	DEACT and meet .10(3)(i) standards[8]	DEACT and meet Rule 0400-12-01-.10(3)(i) standards[8]
	Water Reactive Subcategory based on Rule 0400-12-01-.02(3)(d)1(ii), (iii) and (iv). (Note: This subcategory consists of nonwastewaters only.)	NA	NA	NA	DEACT and meet Rule 0400-12-01-.10(3)(i) standards[8]
	Reactive Cyanides Subcategory based on Rule 0400-12-01-.02(3)(d)1(v).	Cyanides (Total)[7]	57-12-5	Reserved	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
D004 [9]	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for arsenic based on the toxicity characteristic leaching procedure (TCLP) in SW846.	Arsenic	7440-38-2	1.4 and meet .10(3)(i) standards[8]	5.0 mg/l TCLP and meet Rule 0400-12-01-.10(3)(i) standards[8]
D005 [9]	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for barium based on the toxicity characteristic leaching procedure (TCLP) in SW846.	Barium	7440-39-3	1.2 and meet .10(3)(i) standards[8]	21 mg/l TCLP and meet Rule 0400-12-01-.10(3)(i) standards[8]
D006 [9]	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for cadmium based on the toxicity characteristic leaching procedure (TCLP) in SW846.	Cadmium	7440-43-9	0.69 and meet .10(3)(i) standards[8]	0.11 mg/l TCLP and meet Rule 0400-12-01-.10(3)(i) standards[8]

	Cadmium Containing Batteries Subcategory. (Note: This subcategory consists of nonwastewaters only.)	Cadmium	7440-43-9	NA	RTHRM
D006 [9]	Radioactively contaminated cadmium containing batteries. (Note: This subcategory consists of nonwastewaters only)	Cadmium	7440-43-9	NA	Macroencap-sulation in accordance with subparagraph .10(3)(f)
D007 [9]	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for chromium based on the toxicity characteristic leaching procedure (TCLP) in SW846.	Chromium (Total)	7440-47-3	2.77 and meet .10(3)(i) standards[8]	0.60 mg/l TCLP and meet Rule 0400-12-01-.10(3)(i) standards[8]
D008 [9]	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for lead based on the toxicity characteristic leaching procedure (TCLP) in SW846.	Lead	7439-92-1	0.69 and meet .10(3)(i) standards[8]	0.75 mg/l TCLP and meet Rule 0400-12-01-.10(3)(i) standards[8]
	Lead Acid Batteries Subcategory (Note: This standard only applies to lead acid batteries that are identified as RCRA hazardous wastes and that are not excluded elsewhere from regulation under the land disposal restrictions of Rule 0400-12-01-.10 or exempted under other regulations (see Rule 0400-12-01-.09(7)(a)). This subcategory consists of nonwastewaters only.)	Lead	7439-92-1	NA	RLEAD
	Radioactive Lead Solids Subcategory (Note: these lead solids include, but are not limited to, all forms of lead shielding and other elemental forms of lead. These lead solids do not include treatment residuals such as hydroxide sludges, other wastewater treatment residuals, or incinerator ashes that can undergo conventional pozzolanic stabilization, nor do they include organo-lead materials that can be incinerated and stabilized as ash. This subcategory consists of nonwastewaters only.)	Lead	7439-92-1	NA	MACRO

D009 [9]	Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain greater than or equal to 260 mg/kg total mercury that also contain organics and are not incinerator residues. (High Mercury-Organic Subcategory)	Mercury	7439-97-6	NA	IMERC; OR RMERC
	Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain greater than or equal to 260 mg/kg total mercury that are inorganic, including incinerator residues and residues from RMERC. (High Mercury-Inorganic Subcategory)	Mercury	7439-97-6	NA	RMERC
	Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain less than 260 mg/kg total mercury and that are residues from RMERC only. (Low Mercury Subcategory)	Mercury	7439-97-6	NA	0.20 mg/l TCLP and meet Rule 0400-12-01-.10(3)(i) standards[8]
	All other nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846; and contain less than 260 mg/kg total mercury and that are not residues from RMERC. (Low Mercury Subcategory)	Mercury	7439-97-6	NA	0.025 mg/l TCLP and meet Rule 0400-12-01-.10(3)(i) standards[8]
	All D009 wastewaters.	Mercury	7439-97-6	0.15 and meet -.10(3)(i) standards[8]	NA
	Elemental mercury contaminated with radioactive materials. (Note: This subcategory consists of nonwastewaters only.)	Mercury	7439-97-6	NA	AMLGM

	Hydraulic oil contaminated with Mercury Radioactive Materials Subcategory. (Note: This subcategory consists of nonwastewaters only.)	Mercury	7439-97-6	NA	IMERC
D009 [9]	Radioactively contaminated mercury containing batteries. (Note: This subcategory consists of nonwastewaters only)	Mercury	7439-97-6	NA	Macroencap-sulation in accordance with subparagraph .10(3)(f)
D010 [9]	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for selenium based on the toxicity characteristic leaching procedure (TCLP) in SW846.	Selenium	7782-49-2	0.82 and meet -.10(3)(i) standards[8]	5.7 mg/l TCLP and meet -.10(3)(i) standards[8]
D011 [9]	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for silver based on the toxicity characteristic leaching procedure (TCLP) in SW846.	Silver	7440-22-4	0.43 and meet -.10(3)(i) standards[8]	0.14 mg/l TCLP and meet -.10(3)(i) standards[8]
D011 [9]	Radioactively contaminated silver containing batteries. (Note: This subcategory consists of nonwastewaters only)	Silver	7440-22-4	NA	Macroencapsula-tion in accordance with subparagraph .10(3)(f)
D012 [9]	Wastes that are TC for Endrin based on the TCLP in SW846 Method 1311.	Endrin	72-20-8	BIODG; or CMBST	0.13 and meet -.10(3)(i) standards[8]
		Endrin aldehyde	7421-93-4	BIODG; or CMBST	0.13 and meet -.10(3)(i) standards[8]
D013 [9]	Wastes that are TC for Lindane based on the TCLP in SW846 Method 1311.	alpha-BHC	319-84-6	CARBN; or CMBST	0.066 and meet -.10(3)(i) standards[8]
		beta-BHC	319-85-7	CARBN; or CMBST	0.066 and meet -.10(3)(i) standards[8]
		delta-BHC	319-86-8	CARBN; or CMBST	0.066 and meet -.10(3)(i) standards[8]

		gamma-BHC (Lindane)	58-89-9	CARBN; or CMBST	0.066 and meet -.10(3)(i) standards[8]
D014 [9]	Wastes that are TC for Methoxychlor based on the TCLP in SW846 Method 1311.	Methoxychlor	72-43-5	WETOX or CMBST	0.18 and meet -.10(3)(i) standards[8]
D015 [9]	Wastes that are TC for Toxaphene based on the TCLP in SW846 Method 1311.	Toxaphene	8001-35-2	BIODG or CMBST	2.6 and meet -.10(3)(i) standards[8]
D016 [9]	Wastes that are TC for 2,4-D (2,4-Dichlorophenoxyacetic acid) based on the TCLP in SW846 Method 1311.	2,4-D (2,4-Dichlorophenoxyacetic acid)	94-75-7	CHOXD, BIODG, or CMBST	10 and meet -.10(3)(i) standards[8]
D017 [9]	Wastes that are TC for 2,4,5-TP (Silvex) based on the TCLP in SW846 Method 1311.	2,4,5-TP (Silvex)	93-72-1	CHOXD or CMBST	7.9 and meet -.10(3)(i) standards[8]
D018 [9]	Wastes that are TC for Benzene based on the TCLP in SW846 Method 1311.	Benzene	71-43-2	0.14 and meet -.10(3)(i) standards[8]	10 and meet -.10(3)(i) standards[8]
D019 [9]	Wastes that are TC for Carbon tetrachloride based on the TCLP in SW846 Method 1311.	Carbon tetrachloride	56-23-5	0.057 and meet -.10(3)(i) standards[8]	6.0 and meet -.10(3)(i) standards[8]
D020 [9]	Wastes that are TC for Chlordane based on the TCLP in SW846 Method 1311.	Chlordane (alpha and gamma isomers)	57-74-9	0.0033 and meet -.10(3)(i) standards[8]	0.26 and meet -.10(3)(i) standards[8]
D021 [9]	Wastes that are TC for Chlorobenzene based on the TCLP in SW846 Method 1311.	Chlorobenzene	108-90-7	0.057 and meet -.10(3)(i) standards[8]	6.0 and meet -.10(3)(i) standards[8]
D022 [9]	Wastes that are TC for Chloroform based on the TCLP in SW846 Method 1311.	Chloroform	67-66-3	0.046 and meet -.10(3)(i) standards[8]	6.0 and meet -.10(3)(i) standards[8]
D023 [9]	Wastes that are TC for o-Cresol based on the TCLP in SW846 Method 1311.	o-Cresol	95-48-7	0.11 and meet -.10(3)(i) standards[8]	5.6 and meet -.10(3)(i) standards[8]
D024 [9]	Wastes that are TC for m-Cresol based on the TCLP in SW846 Method 1311.	m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77 and meet -.10(3)(i) standards[8]	5.6 and meet -.10(3)(i) standards[8]

D025 [9]	Wastes that are TC for p-Cresol based on the TCLP in SW846 Method 1311.	p-Cresol (difficult to distinguish from m-cresol)	106-44-5	0.77 and meet -.10(3)(i) standards[8]	5.6 and meet -.10(3)(i) standards[8]
D026 [9]	Wastes that are TC for Cresols (Total) based on the TCLP in SW846 Method 1311.	Cresol-mixed isomers (Cresylic acid)(sum of o-, m-, and p-cresol concentrations)	1319-77-3	0.88 and meet -.10(3)(i) standards[8]	11.2 and meet -.10(3)(i) standards[8]
D027 [9]	Wastes that are TC for p-Dichlorobenzene based on the TCLP in SW846 Method 1311.	p-Dichlorobenzene (1,4-Dichlorobenzene)	106-46-7	0.090 and meet -.10(3)(i) standards[8]	6.0 and meet -.10(3)(i) standards[8]
D028 [9]	Wastes that are TC for 1,2-Dichloroethane based on the TCLP in SW846 Method 1311.	1,2-Dichloroethane	107-06-2	0.21 and meet -.10(3)(i) standards[8]	6.0 and meet -.10(3)(i) standards[8]
D029 [9]	Wastes that are TC for 1,1-Dichloroethylene based on the TCLP in SW846 Method 1311.	1,1-Dichloroethylene	75-35-4	0.025 and meet -.10(3)(i) standards[8]	6.0 and meet -.10(3)(i) standards[8]
D030 [9]	Wastes that are TC for 2,4-Dinitrotoluene based on the TCLP in SW846 Method 1311.	2,4-Dinitrotoluene	121-14-2	0.32 and meet -.10(3)(i) standards[8]	140 and meet -.10(3)(i) standards[8]
D031 [9]	Wastes that are TC for Heptachlor based on the TCLP in SW846 Method 1311.	Heptachlor	76-44-8	0.0012 and meet -.10(3)(i) standards[8]	0.066 and meet -.10(3)(i) standards[8]
		Heptachlor epoxide	1024-57-3	0.016 and meet -.10(3)(i) standards[8]	0.066 and meet -.10(3)(i) standards[8]
D032 [9]	Wastes that are TC for Hexachlorobenzene based on the TCLP in SW846 Method 1311.	Hexachloro-benzene	118-74-1	0.055 and meet -.10(3)(i) standards[8]	10 and meet -.10(3)(i) standards[8]
D033 [9]	Wastes that are TC for Hexachlorobutadiene based on the TCLP in SW846 Method 1311.	Hexachloro-butadiene	87-68-3	0.055 and meet -.10(3)(i) standards[8]	5.6 and meet -.10(3)(i) standards[8]
D034 [9]	Wastes that are TC for Hexachloroethane based on the TCLP in SW846 Method 1311.	Hexachloroethane	67-72-1	0.055 and meet -.10(3)(i) standards[8]	30 and meet -.10(3)(i) standards[8]

D035 [9]	Wastes that are TC for Methyl ethyl ketone based on the TCLP in SW846 Method 1311.	Methyl ethyl ketone	78-93-3	0.28 and meet -.10(3)(i) standards[8]	36 and meet -.10(3)(i) standards[8]
D036 [9]	Wastes that are TC for Nitrobenzene based on the TCLP in SW846 Method 1311.	Nitrobenzene	98-95-3	0.068 and meet -.10(3)(i) standards[8]	14 and meet -.10(3)(i) standards[8]
D037 [9]	Wastes that are TC for Pentachlorophenol based on the TCLP in SW846 Method 1311.	Pentachlorophenol	87-86-5	0.089 and meet -.10(3)(i) standards[8]	7.4 and meet -.10(3)(i) standards[8]
D038 [9]	Wastes that are TC for Pyridine based on the TCLP in SW846 Method 1311.	Pyridine	110-86-1	0.014 and meet -.10(3)(i) standards[8]	16 and meet -.10(3)(i) standards[8]
D039 [9]	Wastes that are TC for Tetrachloroethylene based on the TCLP in SW846 Method 1311.	Tetrachloro-ethylene	127-18-4	0.056 and meet -.10(3)(i) standards[8]	6.0 and meet -.10(3)(i) standards[8]
D040 [9]	Wastes that are TC for Trichloroethylene based on the TCLP in SW846 Method 1311.	Trichloroethylene	79-01-6	0.054 and meet -.10(3)(i) standards[8]	6.0 and meet -.10(3)(i) standards[8]
D041 [9]	Wastes that are TC for 2,4,5-Trichlorophenol based on the TCLP in SW846 Method 1311.	2,4,5-Trichlorophenol	95-95-4	0.18 and meet -.10(3)(i) standards[8]	7.4 and meet -.10(3)(i) standards[8]
D042 [9]	Wastes that are TC for 2,4,6-Trichlorophenol based on the TCLP in SW846 Method 1311.	2,4,6-Trichlorophenol	88-06-2	0.035 and meet -.10(3)(i) standards[8]	7.4 and meet -.10(3)(i) standards[8]
D043 [9]	Wastes that are TC for Vinyl chloride based on the TCLP in SW846 Method 1311.	Vinyl chloride	75-01-4	0.27 and meet -.10(3)(i) standards[8]	6.0 and meet -.10(3)(i) standards[8]

F001, F002, F003, F004, & F005	F001, F002, F003, F004 and/or F005 solvent wastes that contain any combination of one or more of the following spent solvents: acetone, benzene, n-butyl alcohol, carbon disulfide, carbon tetrachloride, chlorinated fluorocarbons, chlorobenzene, o-cresol, m-cresol, p-cresol, cyclohexanone, o-dichlorobenzene, 2-ethoxyethanol, ethyl acetate, ethyl benzene, ethyl ether, isobutyl alcohol, methanol, methylene chloride, methyl ethyl ketone, methyl isobutyl ketone, nitrobenzene, 2-nitropropane, pyridine, tetrachloroethylene, toluene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, trichloroethylene, trichloromonofluoromethane, and/or xylenes [except as specifically noted in other subcategories]. See further details of these listings in Rule 0400-12-01-.02(4)(b).	Acetone	67-64-1	0.28	160
		Benzene	71-43-2	0.14	10
		n-Butyl alcohol	71-36-3	5.6	2.6
		Carbon disulfide	75-15-0	3.8	NA
		Carbon tetrachloride	56-23-5	0.057	6.0
		Chlorobenzene	108-90-7	0.057	6.0
		o-Cresol	95-48-7	0.11	5.6
		m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6
		p-Cresol (difficult to distinguish from m-cresol)	106-44-5	0.77	5.6

Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations)	1319-77-3	0.88	11.2
Cyclohexanone	108-94-1	0.36	NA
o-Dichlorobenzene	95-50-1	0.088	6.0
Ethyl acetate	141-78-6	0.34	33
Ethyl benzene	100-41-4	0.057	10
Ethyl ether	60-29-7	0.12	160
Isobutyl alcohol	78-83-1	5.6	170
Methanol	67-56-1	5.6	NA
Methylene chloride	75-9-2	0.089	30
Methyl ethyl ketone	78-93-3	0.28	36
Methyl isobutyl ketone	108-10-1	0.14	33
Nitrobenzene	98-95-3	0.068	14
Pyridine	110-86-1	0.014	16
Tetrachloro-ethylene	127-18-4	0.056	6.0
Toluene	108-88-3	0.080	10
1,1,1-Trichloroethane	71-55-6	0.054	6.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.057	30
Trichloroethylene	79-01-6	0.054	6.0

		Trichloromono-fluoromethane	75-69-4	0.020	30
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
	F003 and/or F005 solvent wastes that contain any combination of one or more of the following three solvents as the only listed F001-5 solvents: carbon disulfide, cyclohexanone, and/or methanol. (formerly Rule 0400-12-01-.10(3)(b)3)	Carbon disulfide	75-15-0	3.8	4.8 mg/l TCLP
		Cyclohexanone	108-94-1	0.36	0.75 mg/l TCLP
		Methanol	67-56-1	5.6	0.75 mg/l TCLP
	F005 solvent waste containing 2-Nitropropane as the only listed F001-5 solvent.	2-Nitropropane	79-46-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
	F005 solvent waste containing 2-Ethoxyethanol as the only listed F001-5 solvent.	2-Ethoxyethanol	110-80-5	BIODG: or CMBST	CMBST
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.	Cadmium	7440-43-9	0.69	0.11 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30

		Lead	7439-92-1	0.69	0.75 mg/l TCLP
		Nickel	7440-02-0	3.98	11 mg/l TCLP
		Silver	7440-22-4	NA	0.14 mg/l TCLP
F007	Spent cyanide plating bath solutions from electroplating operations.	Cadmium	7440-43-9	NA	0.11 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
		Nickel	7440-02-0	3.98	11 mg/l TCLP
		Silver	7440-22-4	NA	0.14 mg/l TCLP
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.	Cadmium	7440-43-9	NA	0.11 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
		Nickel	7440-02-0	3.98	11 mg/l TCLP
		Silver	7440-22-4	NA	0.14 mg/l TCLP
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.	Cadmium	7440-43-9	NA	0.11 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590

		Cyanides (Amenable)[7]	57-12-5	0.86	30
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
		Nickel	7440-02-0	3.98	11 mg/l TCLP
		Silver	7440-22-4	NA	0.14 mg/l TCLP
F010	Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process.	Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	NA
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.	Cadmium	7440-43-9	NA	0.11 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
		Nickel	7440-02-0	3.98	11 mg/l TCLP
		Silver	7440-22-4	NA	0.14 mg/l TCLP
F012	Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process.	Cadmium	7440-43-9	NA	0.11 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
		Nickel	7440-02-0	3.98	11 mg/l TCLP

		Silver	7440-22-4	NA	0.14 mg/l TCLP
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process.	Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
F020, F021, F022, F023, F026	Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of: (1) tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives, excluding wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol (F020); (2) pentachlorophenol, or of intermediates used to produce its derivatives (i.e., F021); (3) tetra-, penta-, or hexachlorobenzenes under alkaline conditions (i.e., F022); and from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of: (1) tri- or tetrachlorophenols, excluding wastes from equipment used only for the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol (F023); (2) tetra-, penta-, or hexachlorobenzenes under alkaline conditions (i.e., F026).	HxCDDs (All Hexachloro-dibenzo-p-dioxins)	NA	0.000063	0.001

		HxCDFs (All Hexachloro-dibenzofurans)	NA	0.000063	0.001
		PeCDDs (All Pentachloro-dibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (All Pentachloro-dibenzofurans)	NA	0.000035	0.001
		Pentachlorophenol	87-86-5	0.089	7.4
		TCDDs (All Tetrachloro-dibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (All Tetrachloro-dibenzofurans)	NA	0.000063	0.001
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
		2,3,4,6-Tetrachlorophenol	58-90-2	0.030	7.4
F024	Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. (This listing does not include wastewaters, wastewater treatment sludges, spent catalysts, and wastes listed in Rule 0400-12-01-.02(4)(b) or (c)).	All F024 wastes	NA	CMBST[11]	CMBST[11]
		2-Chloro-1,3-butadiene	126-99-8	0.057	0.28
		3-Chloropropylene	107-05-1	0.036	30

		1,1-Dichloroethane	75-34-3	0.059	6.0
		1,2-Dichloroethane	107-06-2	0.21	6.0
		1,2-Dichloropropane	78-87-5	0.85	18
		cis-1,3-Dichloropropylene	10061-01-5	0.036	18
		trans-1,3-Dichloropropylene	10061-02-6	0.036	18
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
		Hexachloroethane	67-72-1	0.055	30
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Nickel	7440-02-0	3.98	11 mg/l TCLP
F025	Condensed light ends from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. F025 - Light Ends Subcategory	Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		1,2-Dichloroethane	107-06-2	0.21	6.0
		1,1-Dichloroethylene	75-35-4	0.025	6.0
		Methylene chloride	75-9-2	0.089	30
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		Trichloroethylene	79-01-6	0.054	6.0

		Vinyl chloride	75-01-4	0.27	6.0
	Spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution. F025 - Spent Filters/Aids and Desiccants Subcategory	Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Hexachloro-benzene	118-74-1	0.055	10
		Hexachloro-butadiene	87-68-3	0.055	5.6
		Hexachloroethane	67-72-1	0.055	30
		Methylene chloride	75-9-2	0.089	30
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		Trichloroethylene	79-01-6	0.054	6.0
		Vinyl chloride	75-01-4	0.27	6.0
F027	Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component.).	HxCDDs (All Hexachloro-dibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (All Hexachloro-dibenzofurans)	NA	0.000063	0.001
		PeCDDs (All Pentachloro-dibenzo-p-dioxins)	NA	0.000063	0.001

		PeCDFs (All Pentachloro-dibenzofurans)	NA	0.000035	0.001
		Pentachlorophenol	87-86-5	0.089	7.4
		TCDDs (All Tetrachloro-dibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (All Tetrachloro-dibenzofurans)	NA	0.000063	0.001
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
		2,3,4,6-Tetrachlorophenol	58-90-2	0.030	7.4
F028	Residues resulting from the incineration or thermal treatment of soil contaminated with Hazardous Wastes Codes F020, F021, F023, F026, and F027.	HxCDDs (All Hexachloro-dibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (All Hexachloro-dibenzofurans)	NA	0.000063	0.001
		PeCDDs (All Pentachloro-dibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (All Pentachloro-dibenzofurans)	NA	0.000035	0.001
		Pentachlorophenol	87-86-5	0.089	7.4
		TCDDs (All Tetrachloro-dibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (All Tetrachloro-dibenzofurans)	NA	0.000063	0.001
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4

		2,3,4,6-Tetrachlorophenol	58-90-2	0.030	7.4
F032	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with Rule 0400-12-01-.02(4)(f) or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (i.e., F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or penta-chlorophenol.	Acenaphthene	83-32-9	0.059	3.4
		Anthracene	120-12-7	0.059	3.4
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(b)fluor-anthene (difficult to distinguish from benzo(k)fluor-anthene)	205-99-2	0.11	6.8
		Benzo(k)fluor-anthene (difficult to distinguish from benzo(b)fluor-anthene)	207-08-9	0.11	6.8
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)-anthracene	53-70-3	0.055	8.2
		2-4-Dimethyl phenol	105-67-9	0.036	14
		Fluorene	86-73-7	0.059	3.4
		Hexachloro-dibenzo-p-dioxins	NA	0.000063, or CMBST[11]	0.001, or CMBST[11]

		Hexachloro-dibenzofurans	NA	0.000063, or CMBST[11]	0.001, or CMBST[11]
		Indeno (1,2,3-c,d) pyrene	193-39-5	0.0055	3.4
		Naphthalene	91-20-3	0.059	5.6
		Pentachloro-dibenzo-p-dioxins	NA	0.000063, or CMBST[11]	0.001, or CMBST[11]
		Pentachloro-dibenzofurans	NA	0.000035, or CMBST[11]	0.001, or CMBST[11]
		Pentachlorophenol	87-86-5	0.089	7.4
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Tetrachloro-dibenzo-p-dioxins	NA	0.000063, or CMBST[11]	0.001, or CMBST[11]
		Tetrachloro-dibenzofurans	NA	0.000063, or CMBST[11]	0.001, or CMBST[11]
		2,3,4,6-Tetrachlorophenol	58-90-2	0.030	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
		Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
F034	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	Acenaphthene	83-32-9	0.059	3.4
		Anthracene	120-12-7	0.059	3.4
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(b)fluor-anthene (difficult to distinguish from benzo(k)fluor-anthene)	205-99-2	0.11	6.8
		Benzo(k)fluor-anthene (difficult to distinguish from benzo(b)fluor-nthene)	207-08-9	0.11	6.8
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2

		Fluorene	86-73-7	0.059	3.4
		Indeno (1,2,3-c,d) pyrene	193-39-5	0.0055	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
F035	Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol.	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP

F037	Petroleum refinery primary oil/water/solids separation sludge-Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in: oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in Rule 0400-12-01-.02(4)(b)2(ii) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing.	Acenaphthene	83-32-9	0.059	NA
		Anthracene	120-12-7	0.059	3.4
		Benzene	71-43-2	0.14	10
		Benz(a)anthracene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
		Chrysene	218-01-9	0.059	3.4
		Di-n-butyl phthalate	84-74-2	0.057	28
		Ethylbenzene	100-41-4	0.057	10

		Fluorene	86-73-7	0.059	NA
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.080	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	11 mg/l TCLP

F038	Petroleum refinery secondary (emulsified) oil/water/solids separation sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air floatation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in Rule 0400-12-01-.02(4)(b)2(ii) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological units) and F037, K048, and K051 are not included in this listing.	Benzene	71-43-2	0.14	10
		Benzo(a)pyrene	50-32-8	0.061	3.4
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
		Chrysene	218-01-9	0.059	3.4
		Di-n-butyl phthalate	84-74-2	0.057	28
		Ethylbenzene	100-41-4	0.057	10
		Fluorene	86-73-7	0.059	NA
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6

		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.080	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	11 mg/l TCLP
F039	Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under paragraph (3) of this Rule. (Leachate resulting from the disposal of one or more of the following Hazardous Wastes and no other Hazardous Wastes retains its Hazardous Waste Code(s): F020, F021, F022, F026, F027, and/or F028.).	Acenaphthylene	208-96-8	0.059	3.4
		Acenaphthene	83-32-9	0.059	3.4
		Acetone	67-64-1	0.28	160
		Acetonitrile	75-05-8	5.6	NA
		Acetophenone	96-86-2	0.010	9.7
		2-Acetylamino-fluorene	53-96-3	0.059	140
		Acrolein	107-02-8	0.29	NA

Acrylonitrile	107-13-1	0.24	84
Aldrin	309-00-2	0.021	0.066
4-Aminobiphenyl	92-67-1	0.13	NA
Aniline	62-53-3	0.81	14
o-Anisidine (2-methoxyaniline)	90-04-0	0.010	0.66
Anthracene	120-12-7	0.059	3.4
Aramite	140-57-8	0.36	NA
alpha-BHC	319-84-6	0.00014	0.066
beta-BHC	319-85-7	0.00014	0.066
delta-BHC	319-86-8	0.023	0.066
gamma-BHC	58-89-9	0.0017	0.066
Benzene	71-43-2	0.14	10
Benz(a)anthracene	56-55-3	0.059	3.4
Benzo(b)fluor-anthene (difficult to distinguish from benzo(k)fluor-anthene)	205-99-2	0.11	6.8
Benzo(k)fluor-anthene (difficult to distinguish from benzo(b)fluor-anthene)	207-08-9	0.11	6.8
Benzo(g,h,i)-perylene	191-24-2	0.0055	1.8
Benzo(a)pyrene	50-32-8	0.061	3.4
Bromodichloro-methane	75-27-4	0.35	15

Methyl bromide (Bromomethane)	74-83-9	0.11	15
4-Bromophenyl phenyl ether	101-55-3	0.055	15
n-Butyl alcohol	71-36-3	5.6	2.6
Butyl benzyl phthalate	85-68-7	0.017	28
2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	88-85-7	0.066	2.5
Carbon disulfide	75-15-0	3.8	NA
Carbon tetrachloride	56-23-5	0.057	6.0
Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
p-Chloroaniline	106-47-8	0.46	16
Chlorobenzene	108-90-7	0.057	6.0
Chlorobenzilate	510-15-6	0.10	NA
2-Chloro-1,3-butadiene	126-99-8	0.057	NA
Chlorodibro-methane	124-48-1	0.057	15
Chloroethane	75-00-3	0.27	6.0
bis(2-Chloroethoxy)-methane	111-91-1	0.036	7.2
bis(2-Chloroethyl)ether	111-44-4	0.033	6.0
Chloroform	67-66-3	0.046	6.0
bis(2-Chloroisopropyl)-ether	39638-32-9	0.055	7.2
p-Chloro-m-cresol	59-50-7	0.018	14

		Chloromethane (Methyl chloride)	74-87-3	0.19	30
		2-Chloronaphthalene	91-58-7	0.055	5.6
		2-Chlorophenol	95-57-8	0.044	5.7
		3-Chloropropylene	107-05-1	0.036	30
		Chrysene	218-01-9	0.059	3.4
		p-Cresidine	120-71-8	0.010	0.66
		o-Cresol	95-48-7	0.11	5.6
		m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6
		p-Cresol (difficult to distinguish from m-cresol)	106-44-5	0.77	5.6
		Cyclohexanone	108-94-1	0.36	NA
		1,2-Dibromo-3-chloropropane	96-12-8	0.11	15
		Ethylene dibromide (1,2-Dibromoethane)	106-93-4	0.028	15
		Dibromomethane	74-95-3	0.11	15
		2,4-D (2,4-Dichlorophenoxyacetic acid)	94-75-7	0.72	10
		o,p'-DDD	53-19-0	0.023	0.087
		p,p'-DDD	72-54-8	0.023	0.087
		o,p'-DDE	3424-82-6	0.031	0.087
		p,p'-DDE	72-55-9	0.031	0.087

o,p'-DDT	789-02-6	0.0039	0.087
p,p'-DDT	50-29-3	0.0039	0.087
Dibenz(a,h)-anthracene	53-70-3	0.055	8.2
Dibenz(a,e)pyrene	192-65-4	0.061	NA
m-Dichlorobenzene	541-73-1	0.036	6.0
o-Dichlorobenzene	95-50-1	0.088	6.0
p-Dichlorobenzene	106-46-7	0.090	6.0
Dichlorodifluoro-methane	75-71-8	0.23	7.2
1,1-Dichloroethane	75-34-3	0.059	6.0
1,2-Dichloroethane	107-06-2	0.21	6.0
1,1-Dichloroethylene	75-35-4	0.025	6.0
trans-1,2-Dichloroethylene	156-60-5	0.054	30
2,4-Dichlorophenol	120-83-2	0.044	14
2,6-Dichlorophenol	87-65-0	0.044	14
1,2-Dichloropropane	78-87-5	0.85	18
cis-1,3-Dichloropropylene	10061-01-5	0.036	18
trans-1,3-Dichloropropylene	10061-02-6	0.036	18
Dieldrin	60-57-1	0.017	0.13
Diethyl phthalate	84-66-2	0.20	28
2, 4-Dimethylaniline (2, 4-xylidine)	95-68-1	0.010	0.66

2-4-Dimethyl phenol	105-67-9	0.036	14
Dimethyl phthalate	131-11-3	0.047	28
Di-n-butyl phthalate	84-74-2	0.057	28
1,4-Dinitrobenzene	100-25-4	0.32	2.3
4,6-Dinitro-o-cresol	534-52-1	0.28	160
2,4-Dinitrophenol	51-28-5	0.12	160
2,4-Dinitrotoluene	121-14-2	0.32	140
2,6-Dinitrotoluene	606-20-2	0.55	28
Di-n-octyl phthalate	117-84-0	0.017	28
Di-n-propylnitrosamine	621-64-7	0.40	14
1,4-Dioxane	123-91-1	12.0	170
Diphenylamine (difficult to distinguish from diphenylnitro-samine)	122-39-4	0.92	NA
Diphenylnitro-samine (difficult to distinguish from diphenylamine)	86-30-6	0.92	NA
1,2-Diphenylhydrazine	122-66-7	0.087	NA
Disulfoton	298-04-4	0.017	6.2
Endosulfan I	939-98-8	0.023	0.066
Endosulfan II	33213-6-5	0.029	0.13
Endosulfan sulfate	1031-07-8	0.029	0.13

Endrin	72-20-8	0.0028	0.13
Endrin aldehyde	7421-93-4	0.025	0.13
Ethyl acetate	141-78-6	0.34	33
Ethyl cyanide (Propanenitrile)	107-12-0	0.24	360
Ethyl benzene	100-41-4	0.057	10
Ethyl ether	60-29-7	0.12	160
bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
Ethyl methacrylate	97-63-2	0.14	160
Ethylene oxide	75-21-8	0.12	NA
Famphur	52-85-7	0.017	15
Fluoranthene	206-44-0	0.068	3.4
Fluorene	86-73-7	0.059	3.4
Heptachlor	76-44-8	0.0012	0.066
Heptachlor epoxide	1024-57-3	0.016	0.066
1, 2, 3, 4, 6, 7, 8-Heptachlorodibenzo-p-dioxin (1, 2, 3, 4, 6, 7, 8-HpCDD)	35822-46-9	0.000035	0.0025
1, 2, 3, 4, 6, 7, 8-Heptachlorodibenzofuran (1, 2, 3, 4, 6, 7, 8-HpCDF)	67562-39-4	0.000035	0.0025
1, 2, 3, 4, 7, 8, 9-Heptachlorodibenzofuran (1, 2, 3, 4, 7, 8, 9-HpCDF)	55673-89-7	0.000035	0.0025
Hexachloro-benzene	118-74-1	0.055	10
Hexachloro-butadiene	87-68-3	0.055	5.6

		Hexachloro-cyclopentadiene	77-47-4	0.057	2.4
		HxCDDs (All Hexachloro-dibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (All Hexachloro-dibenzofurans)	NA	0.000063	0.001
		Hexachloroethane	67-72-1	0.055	30
		Hexachloro--propylene	1888-71-7	0.035	30
		Indeno (1,2,3-c,d) pyrene	193-39-5	0.0055	3.4
		Iodomethane	74-88-4	0.19	65
		Isobutyl alcohol	78-83-1	5.6	170
		Isodrin	465-73-6	0.021	0.066
		Isosafrole	120-58-1	0.081	2.6
		Kepone	143-50-8	0.0011	0.13
		Methacrylonitrile	126-98-7	0.24	84
		Methanol	67-56-1	5.6	NA
		Methapyrilene	91-80-5	0.081	1.5
		Methoxychlor	72-43-5	0.25	0.18
		3-Methylchol-anthrene	56-49-5	0.0055	15
		4,4-Methylene bis(2-chloroaniline)	101-14-4	0.50	30
		Methylene chloride	75-09-2	0.089	30
		Methyl ethyl ketone	78-93-3	0.28	36
		Methyl isobutyl ketone	108-10-1	0.14	33

		Methyl methacrylate	80-62-6	0.14	160
		Methyl methansulfonate	66-27-3	0.018	NA
		Methyl parathion	298-00-0	0.014	4.6
		Naphthalene	91-20-3	0.059	5.6
		2-Naphthylamine	91-59-8	0.52	NA
		p-Nitroaniline	100-01-6	0.028	28
		Nitrobenzene	98-95-3	0.068	14
		5-Nitro-o-toluidine	99-55-8	0.32	28
		p-Nitrophenol	100-02-7	0.12	29
		N-Nitrosodiethylamine	55-18-5	0.40	28
		N-Nitro-sodimethylamine	62-75-9	0.40	NA
		N-Nitroso-di-n-butylamine	924-16-3	0.40	17
		N-Nitro-somethylethyl-amine	10595-95-6	0.40	2.3
		N-Nitrosomorpholine	59-89-2	0.40	2.3
		N-Nitrosopiperidine	100-75-4	0.013	35
		N-Nitrosopyrrolidine	930-55-2	0.013	35
		1, 2, 3, 4, 6, 7, 8, 9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	0.000063	0.0025
		1, 2, 3, 4, 6, 7, 8, 9-Octachlorodibenzofuran(OCDF)	39001-02-0	0.000063	0.005
		Parathion	56-38-2	0.014	4.6

Total PCBs (sum of all PCB isomers, or all Aroclors)	1336-36-3	0.10	10
Pentachloro-benzene	608-93-5	0.055	10
PeCDDs (All Pentachloro-dibenzo-p-dioxins)	NA	0.000063	0.001
PeCDFs (All Pentachloro-dibenzofurans)	NA	0.000035	0.001
Pentachloro-nitrobenzene	82-68-8	0.055	4.8
Pentachlorophenol	87-86-5	0.089	7.4
Phenacetin	62-44-2	0.081	16
Phenanthrene	85-01-8	0.059	5.6
Phenol	108-95-2	0.039	6.2
1, 3-Phenylenediamine	108-45-2	0.010	0.66
Phorate	298-02-2	0.021	4.6
Phthalic anhydride	85-44-9	0.055	NA
Pronamide	23950-58-5	0.093	1.5
Pyrene	129-00-0	0.067	8.2
Pyridine	110-86-1	0.014	16
Safrole	94-59-7	0.081	22
Silvex (2,4,5-TP)	93-72-1	0.72	7.9
2,4,5-T	93-76-5	0.72	7.9
1,2,4,5-Tetrachloro-benzene	95-94-3	0.055	14

		TCDDs (All Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (All Tetrachlorodibenzo-furans)	NA	0.000063	0.001
		1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethylene	127-18-4	0.056	6.0
		2,3,4,6-Tetrachlorophenol	58-90-2	0.030	7.4
		Toluene	108-88-3	0.080	10
		Toxaphene	8001-35-2	0.0095	2.6
		Bromoform (Tribromomethane)	75-25-2	0.63	15
		1,2,4-Trichlorobenzene	120-82-1	0.055	19
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		Trichloroethylene	79-01-6	0.054	6.0
		Trichloromono-fluoromethane	75-69-4	0.020	30
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
		1,2,3-Trichloropropane	96-18-4	0.85	30
		1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.057	30

tris(2,3-Dibromopropyl) phosphate	126-72-7	0.11	NA
Vinyl chloride	75-01-4	0.27	6.0
Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
Antimony	7440-36-0	1.9	1.15 mg/l TCLP
Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
Barium	7440-39-3	1.2	21 mg/l TCLP
Beryllium	7440-41-7	0.82	NA
Cadmium	7440-43-9	0.69	0.11 mg/l TCLP
Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
Cyanides (Total)[7]	57-12-5	1.2	590
Cyanides (Amenable)[7]	57-12-5	0.86	NA
Fluoride	16964-48-8	35	NA
Lead	7439-92-1	0.69	0.75 mg/l TCLP
Mercury	7439-97-6	0.15	0.025 mg/l TCLP
Nickel	7440-02-0	3.98	11 mg/l TCLP
Selenium	7782-49-2	0.82	5.7 mg/l TCLP
Silver	7440-22-4	0.43	0.14 mg/l TCLP
Sulfide	8496-25-8	14	NA
Thallium	7440-28-0	1.4	NA
Vanadium	7440-62-2	4.3	NA

K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.	Naphthalene	91-20-3	0.059	5.6
		Pentachlorophenol	87-86-5	0.089	7.4
		Phenanthrene	85-01-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.080	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments.	Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
K003	Wastewater treatment sludge from the production of molybdate orange pigments.	Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
K004	Wastewater treatment sludge from the production of zinc yellow pigments.	Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
K005	Wastewater treatment sludge from the production of chrome green pigments.	Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous).	Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	0.75 mg/l TCLP

	Wastewater treatment sludge from the production of chrome oxide green pigments (hydrated).	Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	NA
K007	Wastewater treatment sludge from the production of iron blue pigments.	Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
K008	Oven residue from the production of chrome oxide green pigments.	Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
K009	Distillation bottoms from the production of acetaldehyde from ethylene.	Chloroform	67-66-3	0.046	6.0
K010	Distillation side cuts from the production of acetaldehyde from ethylene.	Chloroform	67-66-3	0.046	6.0
K011	Bottom stream from the wastewater stripper in the production of acrylonitrile.	Acetonitrile	75-05-8	5.6	38
		Acrylonitrile	107-13-1	0.24	84
		Acrylamide	79-06-1	19	23
		Benzene	71-43-2	0.14	10
		Cyanide (Total)	57-12-5	1.2	590
K013	Bottom stream from the acetonitrile column in the production of acrylonitrile.	Acetonitrile	75-05-8	5.6	38
		Acrylonitrile	107-13-1	0.24	84
		Acrylamide	79-06-1	19	23
		Benzene	71-43-2	0.14	10
		Cyanide (Total)	57-12-5	1.2	590
K014	Bottoms from the acetonitrile purification column in the production of acrylonitrile.	Acetonitrile	75-05-8	5.6	38

		Acrylonitrile	107-13-1	0.24	84
		Acrylamide	79-06-1	19	23
		Benzene	71-43-2	0.14	10
		Cyanide (Total)	57-12-5	1.2	590
K015	Still bottoms from the distillation of benzyl chloride.	Anthracene	120-12-7	0.059	3.4
		Benzal chloride	98-87-3	0.055	6.0
		Benzo(b)fluor-anthene (difficult to distinguish from benzo(k)fluor-anthene)	205-99-2	0.11	6.8
		Benzo(k)fluor-anthene (difficult to distinguish from benzo(b)fluor-anthene)	207-08-9	0.11	6.8
		Phenanthrene	85-01-8	0.059	5.6
		Toluene	108-88-3	0.080	10
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Nickel	7440-02-0	3.98	11 mg/l TCLP
K016	Heavy ends or distillation residues from the production of carbon tetrachloride.	Hexachlorobenz-ene	118-74-1	0.055	10
		Hexachloro-butadiene	87-68-3	0.055	5.6
		Hexachloro-cyclopentadiene	77-47-4	0.057	2.4
		Hexachloroethane	67-72-1	0.055	30
		Tetrachloroethy-lene	127-18-4	0.056	6.0
K017	Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin.	bis(2-Chloroethyl)ether	111-44-4	0.033	6.0

		1,2-Dichloropropane	78-87-5	0.85	18
		1,2,3-Trichloropropane	96-18-4	0.85	30
K018	Heavy ends from the fractionation column in ethyl chloride production.	Chloroethane	75-00-3	0.27	6.0
		Chloromethane	74-87-3	0.19	NA
		1,1-Dichloroethane	75-34-3	0.059	6.0
		1,2-Dichloroethane	107-06-2	0.21	6.0
		Hexachloroben-zene	118-74-1	0.055	10
		Hexachloro-butadiene	87-68-3	0.055	5.6
		Hexachloroethane	67-72-1	0.055	30
		Pentachloroeth-ane	76-01-7	NA	6.0
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
K019	Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production.	bis(2-Chloroethyl)ether	111-44-4	0.033	6.0
		Chlorobenzene	108-90-7	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		p-Dichlorobenzene	106-46-7	0.090	NA
		1,2-Dichloroethane	107-06-2	0.21	6.0
		Fluorene	86-73-7	0.059	NA
		Hexachloroethane	67-72-1	0.055	30
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6

		1,2,4,5-Tetrachloroben-zene	95-94-3	0.055	NA
		Tetrachloroethy-lene	127-18-4	0.056	6.0
		1,2,4-Trichlorobenzene	120-82-1	0.055	19
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
K020	Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production.	1,2-Dichloroethane	107-06-2	0.21	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethy-lene	127-18-4	0.056	6.0
K021	Aqueous spent antimony catalyst waste from fluoromethanes production.	Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Antimony	7440-36-0	1.9	1.15 mg/l TCLP
K022	Distillation bottom tars from the production of phenol/acetone from cumene.	Toluene	108-88-3	0.080	10
		Acetophenone	96-86-2	0.010	9.7
		Diphenylamine (difficult to distinguish from diphenylnitro-samine)	122-39-4	0.92	13
		Diphenylnitro-samine (difficult to distinguish from diphenylamine)	86-30-6	0.92	13
		Phenol	108-95-2	0.039	6.2
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Nickel	7440-02-0	3.98	11 mg/l TCLP

K023	Distillation light ends from the production of phthalic anhydride from naphthalene.	Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	100-21-0	0.055	28
		Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	85-44-9	0.055	28
K024	Distillation bottoms from the production of phthalic anhydride from naphthalene.	Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	100-21-0	0.055	28
		Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	85-44-9	0.055	28
K025	Distillation bottoms from the production of nitrobenzene by the nitration of benzene.	NA	NA	LLEXT fb SSTRP fb CARBN; or CMBST	CMBST
K026	Stripping still tails from the production of methyl ethyl pyridines.	NA	NA	CMBST	CMBST
K027	Centrifuge and distillation residues from toluene diisocyanate production.	NA	NA	CARBN; or CMBST	CMBST
K028	Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane.	1,1-Dichloroethane	75-34-3	0.059	6.0
		trans-1,2-Dichloroethylene	156-60-5	0.054	30
		Hexachlorobuta-diene	87-68-3	0.055	5.6
		Hexachloroethane	67-72-1	0.055	30
		Pentachloroeth-ane	76-01-7	NA	6.0
		1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0

		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethy-lene	127-18-4	0.056	6.0
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		Cadmium	7440-43-9	0.69	NA
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
		Nickel	7440-02-0	3.98	11 mg/l TCLP
K029	Waste from the product steam stripper in the production of 1,1,1-trichloroethane.	Chloroform	67-66-3	0.046	6.0
		1,2-Dichloroethane	107-06-2	0.21	6.0
		1,1-Dichloroethylene	75-35-4	0.025	6.0
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
		Vinyl chloride	75-01-4	0.27	6.0
K030	Column bodies or heavy ends from the combined production of trichloroethylene and perchloroethylene.	o-Dichlorobenzene	95-50-1	0.088	NA
		p-Dichlorobenzene	106-46-7	0.090	NA
		Hexachlorobutadiene	87-68-3	0.055	5.6
		Hexachloroethane	67-72-1	0.055	30
		Hexachloropropy-lene	1888-71-7	NA	30
		Pentachloroben-zene	608-93-5	NA	10
		Pentachloroeth-ane	76-01-7	NA	6.0

		1,2,4,5-Tetrachlorobenz-ene	95-94-3	0.055	14
		Tetrachloroethy-lene	127-18-4	0.056	6.0
		1,2,4-Trichlorobenzene	120-82-1	0.055	19
K031	By-product salts generated in the production of MSMA and cacodylic acid.	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
K032	Wastewater treatment sludge from the production of chlordane.	Hexachlorocyclo-pentadiene	77-47-4	0.057	2.4
		Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
		Heptachlor	76-44-8	0.0012	0.066
		Heptachlor epoxide	1024-57-3	0.016	0.066
K033	Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane.	Hexachlorocyclo-pentadiene	77-47-4	0.057	2.4
K034	Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane.	Hexachlorocyclo-pentadiene	77-47-4	0.057	2.4
K035	Wastewater treatment sludges generated in the production of creosote.	Acenaphthene	83-32-9	NA	3.4
		Anthracene	120-12-7	NA	3.4
		Benz(a)anthra-cene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Chrysene	218-01-9	0.059	3.4
		o-Cresol	95-48-7	0.11	5.6
		m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6

		p-Cresol (difficult to distinguish from m-cresol)	106-44-5	0.77	5.6
		Dibenz(a,h)-anthracene	53-70-3	NA	8.2
		Fluoranthene	206-44-0	0.068	3.4
		Fluorene	86-73-7	NA	3.4
		Indeno(1,2,3-cd)pyrene	193-39-5	NA	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
K036	Still bottoms from toluene reclamation distillation in the production of disulfoton.	Disulfoton	298-04-4	0.017	6.2
K037	Wastewater treatment sludges from the production of disulfoton.	Disulfoton	298-04-4	0.017	6.2
		Toluene	108-88-3	0.080	10
K038	Wastewater from the washing and stripping of phorate production.	Phorate	298-02-2	0.021	4.6
K039	Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate.	NA	NA	CARBN; or CMBST	CMBST
K040	Wastewater treatment sludge from the production of phorate.	Phorate	298-02-2	0.021	4.6
K041	Wastewater treatment sludge from the production of toxaphene.	Toxaphene	8001-35-2	0.0095	2.6
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T.	o-Dichlorobenzene	95-50-1	0.088	6.0

		p-Dichlorobenzene	106-46-7	0.090	6.0
		Pentachlorobenzene	608-93-5	0.055	10
		1,2,4,5-Tetrachloroben-zene	95-94-3	0.055	14
		1,2,4-Trichlorobenzene	120-82-1	0.055	19
K043	2,6-Dichlorophenol waste from the production of 2,4-D.	2,4-Dichlorophenol	120-83-2	0.044	14
		2,6-Dichlorophenol	187-65-0	0.044	14
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
		2,3,4,6-Tetrachlorophe-nol	58-90-2	0.030	7.4
		Pentachlorophe-nol	87-86-5	0.089	7.4
		Tetrachloroethy-lene	127-18-4	0.056	6.0
		HxCDDs (All Hexachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (All Hexachlorodibenzofurans)	NA	0.000063	0.001
		PeCDDs (All Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (All Pentachlorodibenzofurans)	NA	0.000035	0.001
		TCDDs (All Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (All Tetrachlorodibenzo-furans)	NA	0.000063	0.001
K044	Wastewater treatment sludges from the manufacturing and processing of explosives.	NA	NA	DEACT	DEACT

K045	Spent carbon from the treatment of wastewater containing explosives.	NA	NA	DEACT	DEACT
K046	Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds.	Lead	7439-92-1	0.69	0.75 mg/l TCLP
K047	Pink/red water from TNT operations	NA	NA	DEACT	DEACT
K048	Dissolved air flotation (DAF) float from the petroleum refining industry.	Benzene	71-43-2	0.14	10
		Benzo(a)pyrene	50-32-8	0.061	3.4
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
		Chrysene	218-01-9	0.059	3.4
		Di-n-butyl phthalate	84-74-2	0.057	28
		Ethylbenzene	100-41-4	0.057	10
		Fluorene	86-73-7	0.059	NA
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-33	0.080	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590

		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	11 mg/l TCLP
K049	Slop oil emulsion solids from the petroleum refining industry.	Anthracene	120-12-7	0.059	3.4
		Benzene	71-43-2	0.14	10
		Benzo(a)pyrene	50-32-8	0.061	3.4
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
		Carbon disulfide	75-15-0	3.8	NA
		Chrysene	218-01-9	0.059	3.4
		2,4-Dimethylphenol	105-67-9	0.036	NA
		Ethylbenzene	100-41-4	0.057	10
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.080	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Cyanides (Total)[7]	57-12-5	1.2	590
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	11 mg/l TCLP

K050	Heat exchanger bundle cleaning sludge from the petroleum refining industry.	Benzo(a)pyrene	50-32-8	0.061	3.4
		Phenol	108-95-2	0.039	6.2
		Cyanides (Total)[7]	57-12-5	1.2	590
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	11 mg/l TCLP
K051	API separator sludge from the petroleum refining industry.	Acenaphthene	83-32-9	0.059	NA
		Anthracene	120-12-7	0.059	3.4
		Benz(a)anthra-cene	56-55-3	0.059	3.4
		Benzene	71-43-2	0.14	10
		Benzo(a)pyrene	50-32-8	0.061	3.4
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
		Chrysene	218-01-9	0.059	3.4
		Di-n-butyl phthalate	105-67-9	0.057	28
		Ethylbenzene	100-41-4	0.057	10
		Fluorene	86-73-7	0.059	NA
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.08	10

		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Cyanides (Total)[7]	57-12-5	1.2	590
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	11 mg/l TCLP
K052	Tank bottoms (leaded) from the petroleum refining industry.	Benzene	71-43-2	0.14	10
		Benzo(a)pyrene	50-32-8	0.061	3.4
		o-Cresol	95-48-7	0.11	5.6
		m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6
		p-Cresol (difficult to distinguish from m-cresol)	106-44-5	0.77	5.6
		2,4-Dimethylphenol	105-67-9	0.036	NA
		Ethylbenzene	100-41-4	0.057	10
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Toluene	108-88-3	0.08	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30

		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Lead	7439-92-1	0.69	NA
		Nickel	7440-02-0	NA	11 mg/l TCLP
K060	Ammonia still lime sludge from coking operations.	Benzene	71-43-2	0.14	10
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenol	108-95-2	0.039	6.2
		Cyanides (Total)[7]	57-12-5	1.2	590
K061	Emission control dust/sludge from the primary production of steel in electric furnaces.	Antimony	7440-36-0	NA	1.15 mg/l TCLP
		Arsenic	7440-38-2	NA	5.0 mg/l TCLP
		Barium	7440-39-3	NA	21 mg/l TCLP
		Beryllium	7440-41-7	NA	1.22 mg/l TCLP
		Cadmium	7440-43-9	0.69	0.11 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
		Mercury	7439-97-6	NA	0.025 mg/l TCLP
		Nickel	7440-02-0	3.98	11 mg/l TCLP
		Selenium	7782-49-2	NA	5.7 mg/l TCLP
		Silver	7440-22-4	NA	0.14 mg/l TCLP
		Thallium	7440-28-0	NA	0.20 mg/l TCLP

		Zinc	7440-66-6	NA	4.3 mg/l TCLP
K062	Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332).	Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
		Nickel	7440-02-0	3.98	NA
K069	Emission control dust/sludge from secondary lead smelting. - Calcium Sulfate (Low Lead) Subcategory	Cadmium	7440-43-9	0.69	0.11 mg/l TCLP
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
	Emission control dust/sludge from secondary lead smelting. - Non-Calcium Sulfate (High Lead) Subcategory	NA	NA	NA	RLEAD
K071	K071 (Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used) nonwastewaters that are residues from RMERC.	Mercury	7439-97-6	NA	0.20 mg/l TCLP
	K071 (Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used.) nonwastewaters that are not residues from RMERC.	Mercury	7439-97-6	NA	0.025 mg/l TCLP
	All K071 wastewaters.	Mercury	7439-97-6	0.15	NA
K073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.	Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Hexachloroethane	67-72-1	0.055	30
		Tetrachloroethy-lene	127-18-4	0.056	6.0

		1,1,1-Trichloroethane	71-55-6	0.054	6.0
K083	Distillation bottoms from aniline production.	Aniline	62-53-3	0.81	14
		Benzene	71-43-2	0.14	10
		Cyclohexanone	108-94-1	0.36	NA
		Diphenylamine (difficult to distinguish from diphenylnitro-samine)	122-39-4	0.92	13
		Diphenylnitro-samine (difficult to distinguish from diphenylamine)	86-30-6	0.92	13
		Nitrobenzene	98-95-3	0.068	14
		Phenol	108-95-2	0.039	6.2
		Nickel	7440-02-0	3.98	11 mg/l TCLP
K084	Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
K085	Distillation or fractionation column bottoms from the production of chlorobenzenes.	Benzene	71-43-2	0.14	10
		Chlorobenzene	108-90-7	0.057	6.0
		m-Dichlorobenzene	541-73-1	0.036	6.0
		o-Dichlorobenzene	95-50-1	0.088	6.0
		p-Dichlorobenzene	106-46-7	0.090	6.0
		Hexachloroben-zene	118-74-1	0.055	10
		Total PCBs (sum of all PCB isomers, or all Aroclors)	1336-36-3	0.10	10

		Pentachloroben-zene	608-93-5	0.055	10
		1,2,4,5-Tetrachloroben-zene	95-94-3	0.055	14
		1,2,4-Trichlorobenzene	120-82-1	0.055	19
K086	Solvent wastes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and stabilizers containing chromium and lead.	Acetone	67-64-1	0.28	160
		Acetophenone	96-86-2	0.010	9.7
		bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
		n-Butyl alcohol	71-36-3	5.6	2.6
		Butylbenzyl phthalate	85-68-7	0.017	28
		Cyclohexanone	108-94-1	0.36	NA
		o-Dichlorobenzene	95-50-1	0.088	6.0
		Diethyl phthalate	84-66-2	0.20	28
		Dimethyl phthalate	131-11-3	0.047	28
		Di-n-butyl phthalate	84-74-2	0.057	28
		Di-n-octyl phthalate	117-84-0	0.017	28
		Ethyl acetate	141-78-6	0.34	33
		Ethylbenzene	100-41-4	0.057	10
		Methanol	67-56-1	5.6	NA
		Methyl ethyl ketone	78-93-3	0.28	36

		Methyl isobutyl ketone	108-10-1	0.14	33
		Methylene chloride	75-09-2	0.089	30
		Naphthalene	91-20-3	0.059	5.6
		Nitrobenzene	98-95-3	0.068	14
		Toluene	108-88-3	0.080	10
		1,1,1-Trichloroethane	71-55-6	0.054	6.0
		Trichloroethylene	79-01-6	0.054	6.0
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
K087	Decanter tank tar sludge from coking operations.	Acenaphthylene	208-96-8	0.059	3.4
		Benzene	71-43-2	0.14	10
		Chrysene	218-01-9	0.059	3.4
		Fluoranthene	206-44-0	0.068	3.4
		Indeno(1,2,3-cd)pyrene	193-39-5	0.0055	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	85-01-8	0.059	5.6
		Toluene	108-88-3	0.080	10

		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
K088	Spent potliners from primary aluminum reduction.	Acenaphthene	83-32-9	0.059	3.4
		Anthracene	120-12-7	0.059	3.4
		Benz(a)anthra-cene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluor-anthene	205-99-2	0.11	6.8
		Benzo(k)fluor-anthene	207-08-9	0.11	6.8
		Benzo(g,h,i)-perylene	191-24-2	0.0055	1.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)-anthracene	53-70-3	0.055	8.2
		Fluoranthene	206-44-0	0.068	3.4
		Indeno(1,2,3,-cd)pyrene	193-39-5	0.0055	3.4
		Penanthrene	85-01-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Antimony	7440-36-0	1.9	1.15 mg/l TCLP
		Arsenic	7440-38-2	1.4	26.1 mg/kg
		Barium	7440-39-3	1.2	21 mg/l TCLP
		Beryllium	7440-41-7	0.82	1.22 mg/l TCLP
		Cadmium	7440-43-9	0.69	0.11 mg/l TCLP

		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
		Mercury	7439-97-6	0.15	0.025 mg/l TCLP
		Nickel	7440-02-0	3.98	11.0 mg/l TCLP
		Selenium	7782-49-2	0.82	5.7 mg/l TCLP
		Silver	7440-22-4	0.43	0.14 mg/l TCLP
		Cyanide (Total)[7]	57-12-5	1.2	590
		Cyanide (Amenable)[7]	57-12-5	0.86	30
		Fluoride	16984-48-8	35	NA
K093	Distillation light ends from the production of phthalic anhydride from ortho-xylene.	Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	100-21-0	0.055	28
		Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	85-44-9	0.055	28
K094	Distillation bottoms from the production of phthalic anhydride from ortho-xylene.	Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	100-21-0	0.055	28
		Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	85-44-9	0.055	28
K095	Distillation bottoms from the production of 1,1,1-trichloroethane.	Hexachloroethane	67-72-1	0.055	30
		Pentachloroeth-ane	76-01-7	0.055	6.0

		1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethy-lene	127-18-4	0.056	6.0
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		Trichloroethylene	79-01-6	0.054	6.0
K096	Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane.	m-Dichlorobenzene	541-73-1	0.036	6.0
		Pentachloroethane	76-01-7	0.055	6.0
		1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
		1,1,2,2-Tetrachloroethane	79-34-6	0.057	6.0
		Tetrachloroethy-lene	127-18-4	0.056	6.0
		1,2,4-Trichlorobenzene	120-82-1	0.055	19
		1,1,2-Trichloroethane	79-00-5	0.054	6.0
		Trichloroethylene	79-01-6	0.054	6.0
K097	Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane.	Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
		Heptachlor	76-44-8	0.0012	0.066
		Heptachlor epoxide	1024-57-3	0.016	0.066
		Hexachloro-cyclopentadiene	77-47-4	0.057	2.4
K098	Untreated process wastewater from the production of toxaphene.	Toxaphene	8001-35-2	0.0095	2.6

K099	Untreated wastewater from the production of 2,4-D.	2,4-Dichlorophenoxyacetic acid	94-75-7	0.72	10
		HxCDDs (All Hexachloro-dibenzo-p-dioxins)	NA	0.000063	0.001
		HxCDFs (All Hexachlorodibenzofurans)	NA	0.000063	0.001
		PeCDDs (All Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		PeCDFs (All Pentachloro-dibenzofurans)	NA	0.000035	0.001
		TCDDs (All Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
		TCDFs (All Tetrachlorodibenzo-furans)	NA	0.000063	0.001
K100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.	Cadmium	7440-43-9	0.69	0.11 mg/l TCLP
		Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
K101	Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	o-Nitroaniline	88-74-4	0.27	14
		Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
		Cadmium	7440-43-9	0.69	NA
		Lead	7439-92-1	0.69	NA
		Mercury	7439-97-6	0.15	NA

K102	Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds.	o-Nitrophenol	88-75-5	0.028	13
		Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
		Cadmium	7440-43-9	0.69	NA
		Lead	7439-92-1	0.69	NA
		Mercury	7439-97-6	0.15	NA
K103	Process residues from aniline extraction from the production of aniline.	Aniline	62-53-3	0.81	14
		Benzene	71-43-2	0.14	10
		2,4-Dinitrophenol	51-28-5	0.12	160
		Nitrobenzene	98-95-3	0.068	14
		Phenol	108-95-2	0.039	6.2
K104	Combined wastewater streams generated from nitrobenzene/ aniline production.	Aniline	62-53-3	0.81	14
		Benzene	71-43-2	0.14	10
		2,4-Dinitrophenol	51-28-5	0.12	160
		Nitrobenzene	98-95-3	0.068	14
		Phenol	108-95-2	0.039	6.2
		Cyanides (Total)[7]	57-12-5	1.2	590
K105	Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes.	Benzene	71-43-2	0.14	10
		Chlorobenzene	108-90-7	0.057	6.0

		2-Chlorophenol	95-57-8	0.044	5.7
		o-Dichlorobenzene	95-50-1	0.088	6.0
		p-Dichlorobenzene	106-46-7	0.090	6.0
		Phenol	108-95-2	0.039	6.2
		2,4,5-Trichlorophenol	95-95-4	0.18	7.4
		2,4,6-Trichlorophenol	88-06-2	0.035	7.4
K106	K106 (wastewater treatment sludge from the mercury cell process in chlorine production) nonwastewaters that contain greater than or equal to 260 mg/kg total mercury.	Mercury	7439-97-6	NA	RMERC
	K106 (wastewater treatment sludge from the mercury cell process in chlorine production) nonwastewaters that contain less than 260 mg/kg total mercury that are residues from RMERC.	Mercury	7439-97-6	NA	0.20 mg/l TCLP
	Other K106 nonwastewaters that contain less than 260 mg/kg total mercury and are not residues from RMERC.	Mercury	7439-97-6	NA	0.025 mg/l TCLP
	All K106 wastewaters.	Mercury	7439-97-6	0.15	NA
K107	Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	NA	NA	CMBST; or CHOXD fb CARBN; or BIODG fb CARBN	CMBST
K108	Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	NA	NA	CMBST; or CHOXD fb CARBN; or BIODG fb CARBN	CMBST

K109	Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	NA	NA	CMBST; or CHOXD fb CARBN; or BIODG fb CARBN	CMBST
K110	Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides.	NA	NA	CMBST; or CHOXD fb CARBN; or BIODG fb CARBN	CMBST
K111	Product washwaters from the production of dinitrotoluene via nitration of toluene	2,4-Dinitrotoluene	121-14-2	0.32	140
		2,6-Dinitrotoluene	606-20-2	0.55	28
K112	Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene.	NA	NA	CMBST; or CHOXD fb CARBN; or BIODG fb CARBN	CMBST
K113	Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	NA	NA	CARBN; OR CMBST	CMBST
K114	Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	NA	NA	CARBN; or CMBST	CMBST
K115	Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene.	Nickel	7440-02-0	3.98	11 mg/l TCLP
		NA	NA	CARBN; or CMBST	CMBST
K116	Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine.	NA	NA	CARBN; or CMBST	CMBST

K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.	Methyl bromide (Bromomethane)	74-83-9	0.11	15
		Chloroform	67-66-3	0.046	6.0
		Ethylene dibromide (1,2-Dibromoethane)	106-93-4	0.028	15
K118	Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	Methyl bromide (Bromomethane)	74-83-9	0.11	15
		Chloroform	67-66-3	0.046	6.0
		Ethylene dibromide (1,2-Dibromoethane)	106-93-4	0.028	15
K123	Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts.	NA	NA	CMBST; or CHOXD fb (BIODG or CARBN)	CMBST
K124	Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts.	NA	NA	CMBST; or CHOXD fb (BIODG or CARBN)	CMBST
K125	Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts.	NA	NA	CMBST; or CHOXD fb (BIODG or CARBN)	CMBST
K126	Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts.	NA	NA	CMBST; or CHOXD fb (BIODG or CARBN)	CMBST
K131	Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide.	Methyl bromide (Bromomethane)	74-83-9	0.11	15
K132	Spent absorbent and wastewater separator solids from the production of methyl bromide.	Methyl bromide (Bromomethane)	74-83-9	0.11	15

K136	Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	Methyl bromide (Bromomethane)	74-83-9	0.11	15
		Chloroform	67-66-3	0.046	6.0
		Ethylene dibromide (1,2-Dibromoethane)	106-93-4	0.028	15
K141	Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludge from coking operations).	Benzene	71-43-2	0.14	10
		Benz(a)anthra-cene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-2-8	0.061	3.4
		Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)	205-99-2	0.11	6.8
		Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthracene	53-70-3	0.055	8.2
		Indeno(1,2,3-cd)pyrene	193-39-5	0.0055	3.4
K142	Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal.	Benzene	71-43-2	0.14	10
		Benz(a)anthra-cene	56-55-3	0.059	3.4

		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluor-anthene (difficult to distinguish from benzo(k)fluor-anthene)	205-99-2	0.11	6.8
		Benzo(k)fluor-anthene (difficult to distinguish from benzo(b)fluor-anthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthra-cene	53-70-3	0.055	8.2
		Indeno(1,2,3-cd)pyrene	193-39-5	0.0055	3.4
K143	Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal.	Benzene	71-43-2	0.14	10
		Benz(a)anthra-cene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluor-anthene (difficult to distinguish from benzo(k)fluor-anthene)	205-99-2	0.11	6.8
		Benzo(k)flour-anthene (difficult to distinguish from benzo(b)fluor-anthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4

K144	Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal.	Benzene	71-43-2	0.14	10
		Benz(a)anthra-cene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluor-anthene (difficult to distinguish from benzo(k)fluor-anthene)	205-99-2	0.11	6.8
		Benzo(k)fluor-anthene (difficult to distinguish from benzo(b)fluor-anthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthra-cene	53-70-3	0.055	8.2
K145	Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal.	Benzene	71-43-2	0.14	10
		Benz(a)anthra-cene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthra-cene	53-70-3	0.055	8.2
		Naphthalene	91-20-3	0.059	5.6
K147	Tar storage tank residues from coal tar refining.	Benzene	71-43-2	0.14	10
		Benz(a)anthra-cene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4

		Benzo(b)fluor-anthene (difficult to distinguish from benzo(k)fluor-anthene)	205-99-2	0.11	6.8
		Benzo(k)fluoran-thene (difficult to distinguish from benzo(b)fluoran-thene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthra-cene	53-70-3	0.055	8.2
		Indeno(1,2,3-cd)pyrene	193-39-5	0.0055	3.4
K148	Residues from coal tar distillation, including, but not limited to, still bottoms.	Benz(a)anthra-cene	56-55-3	0.059	3.4
		Benzo(a)pyrene	50-32-8	0.061	3.4
		Benzo(b)fluor-anthene (difficult to distinguish from benzo(k)fluor-anthene)	205-99-2	0.11	6.8
		Benzo(k)fluor-anthene (difficult to distinguish from benzo(b)fluor-anthene)	207-08-9	0.11	6.8
		Chrysene	218-01-9	0.059	3.4
		Dibenz(a,h)anthra-cene	53-70-3	0.055	8.2
		Indeno(1,2,3-cd)pyrene	193-39-5	0.0055	3.4

K149	Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. (This waste does not include still bottoms from the distillations of benzyl chloride.)	Chlorobenzene	108-90-7	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Chloromethane	74-87-3	0.19	30
		p-Dichlorobenzene	106-46-7	0.090	6.0
		Hexachloroben-zene	118-74-1	0.055	10
		Pentachloroben-zene	608-93-5	0.055	10
		1,2,4,5-Tetrachloroben-zene	95-94-3	0.055	14
		Toluene	108-88-3	0.080	10
K150	Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Chloromethane	74-87-3	0.19	30
		p-Dichlorobenzene	106-46-7	0.090	6.0
		Hexachlorobenzene	118-74-1	0.055	10
		Pentachloroben-zene	608-93-5	0.055	10

		1,2,4,5-Tetrachloroben-zene	95-94-3	0.055	14
		1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0
		Tetrachloroethyl-ene	127-18-4	0.056	6.0
		1,2,4-Trichlorobenzene	120-82-1	0.055	19
K151	Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups.	Benzene	71-43-2	0.14	10
		Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Hexachlorobenzene	118-74-1	0.055	10
		Pentachloroben-zene	608-93-5	0.055	10
		1,2,4,5-Tetrachloroben-zene	95-94-3	0.055	14
		Tetrachloroethyl-ene	127-18-4	0.056	6.0
		Toluene	108-88-3	0.080	10
K156	Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (This listing does not apply to wastes generated from the manufacturing of 3-iodo-2-propynly n-buthylcarbamate.)	Acetonitrile	75-05-8	5.6	1.8
		Acetophenone	98-86-2	0.010	9.7

Aniline	62-53-3	0.81	14
Benomyl	17804-35-2	0.056	1.4
Benzene	71-43-2	0.14	10
Carbaryl	63-25-2	0.006	0.14
Carbenzadim	10605-21-7	0.056	1.4
Carbofuran	1563-66-2	0.006	0.14
Carbosulfan	55285-14-8	0.028	1.4
Chlorobenzene	108-90-7	0.057	6.0
Chloroform	67-66-3	0.046	6.0
o-Dichlorobenzene	95-50-1	0.088	6.0
Methomyl	16752-77-5	0.028	0.14
Methylene chloride	75-09-2	0.089	30
Methyl ethyl ketone	78-93-3	0.28	36
Naphthalene	91-20-3	0.059	5.6
Phenol	108-95-2	0.039	6.2
Pyridine	110-86-1	0.014	16
Toluene	108-88-3	0.080	10
Triethylamine	121-44-8	0.081	1.5

K157	Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynly n-butylcarbamate.)	Carbon tetrachloride	56-23-5	0.057	6.0
		Chloroform	67-66-3	0.046	6.0
		Chloromethane	74-87-3	0.19	30
		Methomyl	16752-77-5	0.028	0.14
		Methylene chloride	75-09-2	0.089	30
		Methyl ethyl ketone	78-93-3	0.28	36
		Pyridine	110-86-1	0.014	16
		Triethylamine	121-44-8	0.081	1.5
K158	Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propyl n- butylcarbamate.)	Benomyl	17804-35-2	0.056	1.4
		Benzene	71-43-2	0.14	10
		Carbenzadim	10605-21-7	0.056	1.4
		Carbofuran	1563-66-2	0.006	0.14
		Carbosulfan	55285-14-8	0.028	1.4
		Chloroform	67-66-3	0.046	6.0
		Methylene chloride	75-09-2	0.089	30
		Phenol	108-95-2	0.039	6.2

K159	Organics from the treatment of thiocarbamate wastes.[10]	Benzene	71-43-2	0.14	10
		Butylate	2008-41-5	0.042	1.4
		EPTC (Eptam)	759-94-4	0.042	1.4
		Molinate	2212-67-1	0.042	1.4
		Pebulate	1114-71-2	0.042	1.4
		Vernolate	1929-77-7	0.042	1.4
K161	Purification solids (including filtration, evaporation, and centrifugation solids), baghouse dust and floor sweepings from the production of dithiocarbamate acids and their salts.	Antimony	7440-36-0	1.9	[111]1.15
		Arsenic	7440-38-2	1.4	[115]5.0
		Carbon disulfide	75-15-0	3.8	[114]4.8
		Dithiocarbamates (total)	137-30-4	0.028	28
		Lead	7439-92-1	0.69	[110]0.75
		Nickel	7440-02-0	3.98	[111]11
		Selenium	7782-49-2	0.82	[115]5.7
K169	Crude oil tank sediment from petroleum refining operations.	Benz(a)anthra-cene	56-55-3	0.059	3.4
		Benzene	71-43-2	0.14	10
		Benzo(g,h,i)-perylene	191-24-2	0.0055	1.8

		Chrysene	218-01-9	0.059	3.4
		Ethyl benzene	100-41-4	0.057	10
		Fluorene	86-73-7	0.059	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	81-05-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Toluene (Methyl Benzene)	108-88-3	0.080	10
		Xylene(s) (Total)	1330-20-7	0.32	30
K170	Clarified slurry oil sediment from petroleum refining operations.	Benz(a)anthra-cene	56-55-3	0.059	3.4
		Benzene	71-43-2	0.14	10
		Benzo(g,h,i)-perylene	191-24-2	0.0055	1.8
		Chrysene	218-01-9	0.059	3.4

		Dibenz(a,h)-anthracene	53-70-3	0.055	8.2
		Ethyl benzene	100-41-4	0.057	10
		Fluorene	86-73-7	0.059	3.4
		Indeno(1,2,3,-cd)-pyrene	193-39-5	0.0055	3.4
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	81-05-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Toluene (Methyl Benzene)	108-88-3	0.080	10
		Xylene(s)(Total)	1330-20-7	0.32	30
K171	Spent hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feed to other catalytic reactors (this listing does not include inert suport media.).	Benz(a)anthra-cene	56-55-3	.059	34
		Benzene	71-43-2	0.14	10
		Chrysene	218-01-9	0.059	3.4

		Ethyl benzene	100-41-4	0.057	10
		Naphthalene	91-20-3	0.059	5.6
		Phenanthrene	81-05-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Toluene (Methyl Benzene)	108-88-3	0.080	10
		Xylene(s) (Total)	1330-20-7	0.32	30
		Arsenic	7740-38-2	1.4	5 mg/l TCLP
		Nickel	7440-02-0	3.98	11.0 mg/l TCLP
		Vanadium	7440-62-2	4.3	1.6 mg/l TCLP
		Reactive sulfides	NA	DEACT	DEACT
K172	Spent hydrorefining catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media.).	Benzene	71-43-2	0.14	10
		Ethyl benzene	100-41-4	0.057	10

		Toluene (Methyl Benzene)	108-88-3	0.080	10
		Xylene(s) (Total)	1330-20-7	0.32	30
		Antimony	7740-36-0	1.9	1.15 mg/l TCLP
		Arsenic	7740-38-2	1.4	5 mg/l TCLP
		Nickel	7440-02-0	3.98	11.0 mg/l TCLP
		Vanadium	7440-62-2	4.3	1.6 mg/l TCLP
		Reactive Sulfides	NA	DEACT	DEACT
K174	Wastewater treatment sludges from the production of ethylene dichloride or vinyl chloride monomer.	1, 2, 3, 4, 6, 7, 8-Heptachlorodibenzo-p-dioxin (1, 2, 3, 4, 6, 7, 8-HpCDD)	35822-46-9	0.000035 or CMBST[11]	0.0025 or CMBST[11]
		1, 2, 3, 4, 6, 7, 8-Heptachlorodibenzofuran (1, 2, 3, 4, 6, 7, 8-HpCDF)	67562-39-4	0.000035 or CMBST[11]	0.0025 or CMBST[11]
		1, 2, 3, 4, 7, 8, 9-Heptachlorodibenzofuran (1, 2, 3, 4, 7, 8, 9-HpCDF)	55673-89-7	0.000035 or CMBST[11]	0.0025 or CMBST[11]
		HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8	0.000063 or CMBST[11]	0.001 or CMBST[11]
		HxCDFs (All Hexachlorodibenzofurans)	55684-94-1	0.000063 or CMBST[11]	0.001 or CMBST[11]

		1, 2, 3, 4, 6, 7, 8, 9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	0.000063 or CMBST[11]	0.005 or CMBST[11]
		1, 2, 3, 4, 6, 7, 8, 9-Octachlorodibenzofuran (OCDF)	39001-02-0	0.000063 or CMBST[11]	0.005 or CMBST[11]
		PeCDDs (All Pentachlorodibenzo-p-dioxins)	36088-22-9	0.000063 or CMBST[11]	0.001 or CMBST[11]
		PeCDFs (All Pentachlorodibenzofurans)	30402-15-4	0.000035 or CMBST[11]	0.001 or CMBST[11]
		TCDDs (All Tetrachlorodi-benzo-p-dioxins)	41903-57-5	0.000063 or CMBST[11]	0.001 or CMBST[11]
		TCDFs (All Tetrachlorodibenzofurans)	55722-27-5	0.000063 or CMBST[11]	0.001 or CMBST[11]
		Arsenic	7440-36-0	1.4	5.0 mg/L TCLP
K175	Wastewater treatment sludge from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene-based process.	Mercury[12]	7438-97-6	NA	0.025 mg/L TCLP
		pH[12]		NA	pH ≤6.0
	All K175 wastewaters	Mercury	7438-97-6	0.15	NA
K176	Baghouse filters from the production of antimony oxide, including filters from the production of intermediates (e. g., antimony metal or crude antimony oxide)	Antimony	7440-36-0	1.9	1.15 mg/L TCLP
		Arsenic	7440-38-2	1.4	5.0 mg/L TCLP

		Cadmium	7440-43-9	0.69	0.11 mg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/L TCLP
		Mercury	7439-97-6	0.15	0.025 mg/L TCLP
K177	Slag from the production of antimony oxide that is speculatively accumulated or disposed, including slag from the production of intermediates (e.g., antimony metal or crude antimony oxide)	Antimony	7440-36-0	1.9	1.15 mg/L TCLP
		Arsenic	7440-38-2	1.4	5.0 mg/L TCLP
		Lead	7439-92-1	0.69	0.75 mg/L TCLP
K178	Residues from manufacturing and manufacturing-site storage of ferric chloride from acids formed during the production of titanium dioxide using the chloride-ilmenite process	1, 2, 3, 4, 6, 7, 8-Heptachlorodiben-zop-dioxin (1, 2, 3, 4, 6, 7, 8-HpCDD)	35822-39-4	0.000035 or CMBST[11]	0.0025 or CMBST[11]
		1, 2, 3, 4, 6, 7, 8-Heptachlorodiben-zofuran (1, 2, 3, 4, 6, 7, 8-HpCDF)	67562-39-4	0.000035 or CMBST[11]	0.0025 or CMBST[11]
		1, 2, 3, 4, 7, 8, 9-Heptachlorodiben-zofuran (1, 2, 3, 4, 7, 8, 9-HpCDF)	55673-89-7	0.000035 or CMBST[11]	0.0025 or CMBST[11]
		HxCDDs (All Hexachlorodibenzo-p-dioxins)	34465-46-8	0.000063 or CMBST[11]	0.001 or CMBST[11]
		HxCDFs (All Hexachlorodibenzo-furans)	55684-94-1	0.000063 or CMBST[11]	0.001or CMBST[11]

		1, 2, 3, 4, 6, 7, 8, 9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	0.000063 or CMBST[11]	0.005 or CMBST[11]
		1, 2, 3, 4, 6, 7, 8, 9-Octachlorodibenzo-furan (OCDF)	39001-02-0	0.000063 or CMBST[11]	0.005 or CMBST[11]
		PeCDDs (All Pentachlorodiben-zop-dioxins)	36088-22-9	0.000063 or CMBST[11]	0.001 or CMBST[11]
		PeCDFs (All Pentachlorodiben-zop-dioxins)	30402-15-4	0.000035 or CMBST[11]	0.001 or CMBST[11]
		TCDDs (All Tetrachlorodibenzo-p-dioxings)	41903-57-5	0.000063 or CMBST[11]	0.001 or CMBST[11]
		TCDFs (All Tetrachlorodibenzo-furans)	55722-27-5	0.000063 or CMBST[11]	0.001 or CMBST[11]
		Thallium	7440-28-0	1.4	0.20 mg/L TCLP
K181	Nonwastewaters from the production of dyes and/or pigments (including nonwastewaters commingled at the point of generation with nonwastewaters from other processes) that, at the point of generation, contain mass loadings of any of the constituents identified in part 3 of Rule 0400-12-01-.02(4)(c) that are equal to or greater than the corresponding part 3 levels, as determined on a calendar year basis.	Aniline	62-53-3	0.81	14
		o-Anisidine (2-methoxyaniline)	90-04-0	0.010	0.66
		4-Chloroaniline	106-47-8	0.46	16

		p-Cresidine	120-71-8	0.010	0.66
		2, 4-Dimethylaniline (2, 4-xylidine)	95-68-1	0.010	0.66
		1, 2-Phenylenediamine	95-54-5	CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN	CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN
		1, 3-Phenylenediamine	108-45-2	0.010	0.66
P001	Warfarin, & salts, when present at concentrations greater than 0.3%	Warfarin	81-81-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P002	1-Acetyl-2-thiourea	1-Acetyl-2-thiourea	591-08-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P003	Acrolein	Acrolein	107-02-8	0.29	CMBST
P004	Aldrin	Aldrin	309-00-2	0.021	0.066
P005	Allyl alcohol	Allyl alcohol	107-18-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P006	Aluminum phosphide	Aluminum phosphide	20859-73-8	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
P007	5-Aminomethyl 3-isoxazolol	5-Aminomethyl 3-isoxazolol	2763-96-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P008	4-Aminopyridine	4-Aminopyridine	504-24-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P009	Ammonium picrate	Ammonium picrate	131-74-8	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST

P010	Arsenic acid	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
P011	Arsenic pentoxide	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
P012	Arsenic trioxide	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
P013	Barium cyanide	Barium	7440-39-3	NA	21 mg/l TCLP
		Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
P014	Thiophenol (Benzene thiol)	Thiophenol (Benzene thiol)	108-98-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P015	Beryllium dust	Beryllium	7440-41-7	RMETL; or RTHRM	RMETL; or RTHRM
P016	Dichloromethyl ether (Bis(chloromethyl)ether)	Dichloromethyl ether	542-88-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P017	Bromoacetone	Bromoacetone	598-31-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P018	Brucine	Brucine	357-57-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P020	2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	2-sec-Butyl-4,6-dinitrophenol (Dinoseb)	88-85-7	0.066	2.5
P021	Calcium cyanide	Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
P022	Carbon disulfide	Carbon disulfide	75-15-0	3.8	CMBST
		Carbon disulfide; alternate[6] standard for nonwastewaters only	75-15-0	NA	4.8 mg/l TCLP

P023	Chloroacetaldehyde	Chloroacetalde-hyde	107-20-0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P024	p-Chloroaniline	p-Chloroaniline	106-47-8	0.46	16
P026	1-(o-Chlorophenyl)thiourea	1-(o-Chlorophenyl)thiourea	5344-82-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P027	3-Chloropropionitrile	3-Chloropropionitrile	542-76-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P028	Benzyl chloride	Benzyl chloride	100-44-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P029	Copper cyanide	Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
P030	Cyanides (soluble salts and complexes)	Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
P031	Cyanogen	Cyanogen	460-19-5	CHOXD; WETOX; or CMBST	CHOXD; WETOX; or CMBST
P033	Cyanogen chloride	Cyanogen chloride	506-77-4	CHOXD; WETOX; or CMBST	CHOXD; WETOX; or CMBST
P034	2-Cyclohexyl-4,6-dinitrophenol	2-Cyclohexyl-4,6-dinitrophenol	131-89-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P036	Dichlorophenylarsine	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
P037	Dieldrin	Dieldrin	60-57-1	0.017	0.13
P038	Diethylarsine	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
P039	Disulfoton	Disulfoton	298-04-4	0.017	6.2
P040	0,0-Diethyl O-pyrazinyl phosphorothioate	0,0-Diethyl O-pyrazinyl phosphorothioate	297-97-2	CARBN; or CMBST	CMBST

P041	Diethyl-p-nitrophenyl phosphate	Diethyl-p-nitrophenyl phosphate	311-45-5	CARBN; or CMBST	CMBST
P042	Epinephrine	Epinephrine	51-43-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P043	Diisopropylfluorophosphate (DFP)	Diisopropylfluoro-phosphate (DFP)	55-91-4	CARBN; or CMBST	CMBST
P044	Dimethoate	Dimethoate	60-51-5	CARBN; or CMBST	CMBST
P045	Thiofanox	Thiofanox	39196-18-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P046	alpha, alpha-Dimethylphenethylamine	alpha, alpha-Dimethylphenethyl-amine	122-09-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P047	4,6-Dinitro-o-cresol	4,6-Dinitro-o-cresol	543-52-1	0.28	160
	4,6-Dinitro-o-cresol salts	NA	NA	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P048	2,4-Dinitrophenol	2,4-Dinitrophenol	51-28-5	0.12	160
P049	Dithiobiuret	Dithiobiuret	541-53-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P050	Endosulfan	Endosulfan I	939-98-8	0.023	0.066
		Endosulfan II	33213-6-5	0.029	0.13
		Endosulfan sulfate	1031-07-8	0.029	0.13
P051	Endrin	Endrin	72-20-8	0.0028	0.13
		Endrin aldehyde	7421-93-4	0.025	0.13
P054	Aziridine	Aziridine	151-56-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

P056	Fluorine	Fluoride (measured in wastewaters only)	16964-48-8	35	ADGAS fb NEUTR
P057	Fluoroacetamide	Fluoroacetamide	640-19-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P058	Fluoroacetic acid, sodium salt	Fluoroacetic acid, sodium salt	62-74-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P059	Heptachlor	Heptachlor	76-44-8	0.0012	0.066
		Heptachlor epoxide	1024-57-3	0.016	0.066
P060	Isodrin	Isodrin	465-73-6	0.021	0.066
P062	Hexaethyl tetraphosphate	Hexaethyl tetraphosphate	757-58-4	CARBN; or CMBST	CMBST
P063	Hydrogen cyanide	Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
P064	Isocyanic acid, ethyl-ester	Isocyanic acid, ethyl ester	624-83-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P065	Mercury fulminate nonwastewaters, regardless of their total mercury content, that are not incinerator residues or are not residues from RMERC.	Mercury	7439-97-6	NA	IMERC
	Mercury fulminate nonwastewaters that are either incinerator residues or are residues from RMERC; and contain greater than or equal to 260 mg/kg total mercury.	Mercury	7439-97-6	NA	RMERC
	Mercury fulminate nonwastewaters that are residues from RMERC and contain less than 260 mg/kg total mercury.	Mercury	7439-97-6	NA	0.20 mg/l TCLP

	Mercury fulminate nonwastewaters that are incinerator residues and contain less than 260 mg/kg total mercury.	Mercury	7439-97-6	NA	0.025 mg/l TCLP
	All mercury fulminate wastewaters.	Mercury	7439-97-6	0.15	NA
P066	Methomyl	Methomyl	16752-77-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P067	2-Methyl-aziridine	2-Methyl-aziridine	75-55-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P068	Methyl hydrazine	Methyl hydrazine	60-34-4	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
P069	2-Methyllactonitrile	2-Methyllactonitrile	75-86-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P070	Aldicarb	Aldicarb	116-06-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P071	Methyl parathion	Methyl parathion	298-00-0	0.014	4.6
P072	1-Naphthyl-2-thiourea	1-Naphthyl-2-thiourea	86-88-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P073	Nickel carbonyl	Nickel	7440-02-0	3.98	11 mg/l TCLP
P074	Nickel cyanide	Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
		Nickel	7440-02-0	3.98	11 mg/l TCLP
P075	Nicotine and salts	Nicotine and salts	54-11-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P076	Nitric oxide	Nitric oxide	10102-43-9	ADGAS	ADGAS

P077	p-Nitroaniline	p-Nitroaniline	100-01-6	0.028	28
P078	Nitrogen dioxide	Nitrogen dioxide	10102-44-0	ADGAS	ADGAS
P081	Nitroglycerin	Nitroglycerin	55-63-0	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
P082	N-Nitrosodimethylamine	N-Nitrosodimethyl-amine	62-75-9	0.40	2.3
P084	N-Nitrosomethylvinylamine	N-Nitrosomethylvinyl-amine	4549-40-0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P085	Octamethylpyrophosph-oramide	Octamethylpyro-phosphoramide	152-16-9	CARBN; or CMBST	CMBST
P087	Osmium tetroxide	Osmium tetroxide	20816-12-0	RMETL; or RTHRM	RMETL; or RTHRM
P088	Endothall	Endothall	145-73-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P089	Parathion	Parathion	56-38-2	0.014	4.6
P092	Phenyl mercuric acetate nonwastewaters, regardless of their total mercury content, that are not incinerator residues or are not residues from RMERC.	Mercury	7439-97-6	NA	IMERC; or RMERC
	Phenyl mercuric acetate nonwastewaters that are either incinerator residues or are residues from RMERC; and still contain greater than or equal to 260 mg/kg total mercury.	Mercury	7439-97-6	NA	RMERC
	Phenyl mercuric acetate nonwastewaters that are residues from RMERC and contain less than 260 mg/kg total mercury.	Mercury	7439-97-6	NA	0.20 mg/l TCLP
	Phenyl mercuric acetate nonwastewaters that are incinerator residues and contain less than 260 mg/kg total mercury.	Mercury	7439-97-6	NA	0.025 mg/l TCLP

	All phenyl mercuric acetate wastewaters.	Mercury	7439-97-6	0.15	NA
P093	Phenylthiourea	Phenylthiourea	103-85-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P094	Phorate	Phorate	298-02-2	0.021	4.6
P095	Phosgene	Phosgene	75-44-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P096	Phosphine	Phosphine	7803-51-2	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
P097	Famphur	Famphur	52-85-7	0.017	15
P098	Potassium cyanide.	Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
P099	Potassium silver cyanide	Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
		Silver	7440-22-4	0.43	0.14 mg/l TCLP
P101	Ethyl cyanide (Propanenitrile)	Ethyl cyanide (Propanenitrile)	107-12-0	0.24	360
P102	Propargyl alcohol	Propargyl alcohol	107-19-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P103	Selenourea	Selenium	7782-49-2	0.82	5.7 mg/l TCLP
P104	Silver cyanide	Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
		Silver	7440-22-4	0.43	0.14 mg/l TCLP
P105	Sodium azide	Sodium azide	26628-22-8	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST

P106	Sodium cyanide	Cyanides (Total)[7]	57-12-5	1.2	590
		Cyanides (Amenable)[7]	57-12-5	0.86	30
P108	Strychnine and salts	Strychnine and salts	57-24-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P109	Tetraethyldithiopyro-phosphate	Tetraethyldithio-pyrophosphate	3689-24-5	CARBN; or CMBST	CMBST
P110	Tetraethyl lead	Lead	7439-92-1	0.69	0.75 mg/l TCLP
P111	Tetraethylpyrophosphate	Tetraethylpyrophosph ate	107-49-3	CARBN; or CMBST	CMBST
P112	Tetranitromethane	Tetranitromethane	509-14-8	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
P113	Thallic oxide	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
P114	Thallium selenite	Selenium	7782-49-2	0.82	5.7 mg/l TCLP
P115	Thallium (I) sulfate	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
P116	Thiosemicarbazide	Thiosemicarba-zide	79-19-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P118	Trichloromethanethiol	Trichloro-methanethiol	75-70-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
P119	Ammonium vanadate	Vanadium (measured in wastewaters only)	7440-62-2	4.3	STABL
P120	Vanadium pentoxide	Vanadium (measured in wastewaters only)	7440-62-2	4.3	STABL
P121	Zinc cyanide	Cyanides (Total)[7]	57-12-5	1.2	590

		Cyanides (Amenable)[7]	57-12-5	0.86	30
P122	Zinc phosphide Zn_3P_2, when present at concentrations greater than 10%	Zinc Phosphide	1314-84-7	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
P123	Toxaphene	Toxaphene	8001-35-2	0.0095	2.6
P127	Carbofuran	Carbofuran	1563-66-2	0.006	0.14
P128	Mexacarbate	Mexacarbate	315-18-4	0.056	1.4
P185	Tirpate [10]	Tirpate	26419-73-8	0.056	0.28
P188	Physostigmine salicylate	Physostigmine salicylate	57-64-7	0.056	1.4
P189	Carbosulfan	Carbosulfan	55285-14-8	0.028	1.4
P190	Metolcarb	Metolcarb	1129-41-5	0.056	1.4
P191	Dimetilan [10]	Dimetilan	644-64-4	0.056	1.4
P192	Isolan [10]	Isolan	119-38-0	0.056	1.4
P194	Oxamyl	Oxamyl	23135-22-0	0.056	0.28
P196	Manganese dimethyldithiocarbamate	Dithiocarbamates (total)	NA	0.028	28
P197	Formparanate [10]	Formparanate	17702-57-7	0.056	1.4
P198	Formetanate hydrochloride	Formetanate hydrochloride	23422-53-9	0.056	1.4
P199	Methiocarb	Methiocarb	2032-65-7	0.056	1.4
P201	Promecarb	Promecarb	2631-37-0	0.056	1.4
P202	m-Cumenyl methylcarbamate	m-Cumenyl methylcarbamate	64-00-6	0.056	1.4
P203	Aldicarb sulfone	Aldicarb sulfone	1646-88-4	0.056	0.28
P204	Physostigmine	Physostigmine	57-47-6	0.056	1.4
P205	Ziram	Dithiocarbamates (total)	NA	0.028	28

U001	Acetaldehyde	Acetaldehyde	75-07-0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U002	Acetone	Acetone	67-64-1	0.28	160
U003	Acetonitrile	Acetonitrile	75-05-8	5.6	CMBST
		Acetonitrile; alternate[6] standard for nonwastewaters only	75-05-8	NA	38
U004	Acetophenone	Acetophenone	98-86-2	0.010	9.7
U005	2-Acetylaminofluorene	2-Acetylamino-fluorene	53-96-3	0.059	140
U006	Acetyl chloride	Acetyl Chloride	75-36-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U007	Acrylamide	Acrylamide	79-06-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U008	Acrylic acid	Acrylic acid	79-10-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U009	Acrylonitrile	Acrylonitrile	107-13-1	0.24	84
U010	Mitomycin C	Mitomycin C	50-07-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U011	Amitrole	Amitrole	61-82-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U012	Aniline	Aniline	62-53-3	0.81	14
U014	Auramine	Auramine	492-80-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

U015	Azaserine	Azaserine	115-02-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U016	Benz(c)acridine	Benz(c)acridine	225-51-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U017	Benzal chloride	Benzal chloride	98-87-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U018	Benz(a)anthracene	Benz(a)anthra-cene	56-55-3	0.059	3.4
U019	Benzene	Benzene	71-43-2	0.14	10
U020	Benzenesulfonyl chloride	Benzenesulfonyl chloride	98-09-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U021	Benzidine	Benzidine	92-87-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U022	Benzo(a)pyrene	Benzo(a)pyrene	50-32-8	0.061	3.4
U023	Benzotrichloride	Benzotrichloride	98-07-7	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U024	bis(2-Chloroethoxy)methane	bis(2-Chloroethoxy)-methane	111-91-1	0.036	7.2
U025	bis(2-Chloroethyl)ether	bis(2-Chloroethyl)ether	111-44-4	0.033	6.0
U026	Chlornaphazine	Chlornaphazine	494-03-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U027	bis(2-Chloroisopropyl)ether	bis(2-Chloroisopropyl)ether	39638-32-9	0.055	7.2
U028	bis(2-Ethylhexyl) phthalate	bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
U029	Methyl bromide (Bromomethane)	Methyl bromide (Bromomethane)	74-83-9	0.11	15

U030	4-Bromophenyl phenyl ether	4-Bromophenyl phenyl ether	101-55-3	0.055	15
U031	n-Butyl alcohol	n-Butyl alcohol	71-36-3	5.6	2.6
U032	Calcium chromate	Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
U033	Carbon oxyfluoride	Carbon oxyfluoride	353-50-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U034	Trichloroacetaldehyde (Chloral)	Trichloroacetal-dehyde (Chloral)	75-87-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U035	Chlorambucil	Chlorambucil	305-03-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U036	Chlordane	Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
U037	Chlorobenzene	Chlorobenzene	108-90-7	0.057	6.0
U038	Chlorobenzilate	Chlorobenzilate	510-15-6	0.10	CMBST
U039	p-Chloro-m-cresol	p-Chloro-m-cresol	59-50-7	0.018	14
U041	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	106-89-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U042	2-Chloroethyl vinyl ether	2-Chloroethyl vinyl ether	110-75-8	0.062	CMBST
U043	Vinyl chloride	Vinyl chloride	75-01-4	0.27	6.0
U044	Chloroform	Chloroform	67-66-3	0.046	6.0
U045	Chloromethane (Methyl chloride)	Chloromethane (Methyl chloride)	74-87-3	0.19	30
U046	Chloromethyl methyl ether	Chloromethyl methyl ether	107-30-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

U047	2-Chloronaphthalene	2-Chloronaphthal-ene	91-58-7	0.055	5.6
U048	2-Chlorophenol	2-Chlorophenol	95-57-8	0.044	5.7
U049	4-Chloro-o-toluidine hydrochloride	4-Chloro-o-toluidine hydrochloride	3165-93-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U050	Chrysene	Chrysene	218-01-9	0.059	3.4
U051	Creosote	Naphthalene	91-20-3	0.059	5.6
		Pentachlorophe-nol	87-86-5	0.089	7.4
		Phenanthrene	85-01-8	0.059	5.6
		Pyrene	129-00-0	0.067	8.2
		Toluene	108-88-3	0.080	10
		Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
		Lead	7439-92-1	0.69	0.75 mg/l TCLP
U052	Cresols (Cresylic acid)	o-Cresol	95-48-7	0.11	5.6
		m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6
		p-Cresol (difficult to distinguish from m-cresol)	106-44-5	0.77	5.6
		Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations)	1319-77-3	0.88	11.2

U053	Crotonaldehyde	Crotonaldehyde	4170-30-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U055	Cumene	Cumene	98-82-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U056	Cyclohexane	Cyclohexane	110-82-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U057	Cyclohexanone	Cyclohexanone	108-94-1	0.36	CMBST
		Cyclohexanone; alternate[6] standard for nonwastewaters only	108-94-1	NA	0.75 mg/l TCLP
U058	Cyclophosphamide	Cyclophospha-mide	50-18-0	CARBN; or CMBST	CMBST
U059	Daunomycin	Daunomycin	20830-81-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U060	DDD	o,p'-DDD	53-19-0	0.023	0.087
		p,p'-DDD	72-54-8	0.023	0.087
U061	DDT	o-p'-DDT	789-02-6	0.0039	0.087
		p,p'-DDT	50-29-3	0.0039	0.087
		o,p'-DDD	53-19-0	0.023	0.087
		p,p'-DDD	72-54-8	0.023	0.087
		o,p'-DDE	3424-82-6	0.031	0.087
		p,p'-DDE	72-55-9	0.031	0.087
U062	Diallate	Diallate	2303-16-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

U063	Dibenz(a,h)anthracene	Dibenz(a,h)anthracene	53-70-3	0.055	8.2
U064	Dibenz(a,i)pyrene	Dibenz(a,i)pyrene	189-55-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U066	1,2-Dibromo-3-chloropropane	1,2-Dibromo-3-chloropropane	96-12-8	0.11	15
U067	Ethylene dibromide (1,2-Dibromoethane)	Ethylene dibromide (1,2-Dibromoethane)	106-93-4	0.028	15
U068	Dibromomethane	Dibromomethane	74-95-3	0.11	15
U069	Di-n-butyl phthalate	Di-n-butyl phthalate	84-74-2	0.057	28
U070	o-Dichlorobenzene	o-Dichlorobenzene	95-50-1	0.088	6.0
U071	m-Dichlorobenzene	m-Dichlorobenzene	541-73-1	0.036	6.0
U072	p-Dichlorobenzene	p-Dichlorobenzene	106-46-7	0.090	6.0
U073	3,3'-Dichlorobenzidine	3,3'-Dichlorobenzidine	91-94-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U074	1,4-Dichloro-2-butene	cis-1,4-Dichloro-2-butene	1476-11-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
		trans-1,4-Dichloro-2-butene	764-41-0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U075	Dichlorodifluoromethane	Dichlorodifluoromethane	75-71-8	0.23	7.2
U076	1,1-Dichloroethane	1,1-Dichloroethane	75-34-3	0.059	6.0
U077	1,2-Dichloroethane	1,2-Dichloroethane	107-06-2	0.21	6.0
U078	1,1-Dichloroethylene	1,1-Dichloroethylene	75-35-4	0.025	6.0
U079	1,2-Dichloroethylene	trans-1,2-Dichloroethylene	156-60-5	0.054	30
U080	Methylene chloride	Methylene chloride	75-09-2	0.089	30

U081	2,4-Dichlorophenol	2,4-Dichlorophenol	120-83-2	0.044	14
U082	2,6-Dichlorophenol	2,6-Dichlorophenol	87-65-0	0.044	14
U083	1,2-Dichloropropane	1,2-Dichloropropane	78-87-5	0.85	18
U084	1,3-Dichloropropylene	cis-1,3-Dichloropropylene	10061-01-5	0.036	18
		trans-1,3-Dichloropropylene	10061-02-6	0.036	18
U085	1,2:3,4-Diepoxybutane	1,2:3,4-Diepoxybutane	1464-53-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U086	N,N'-Diethylhydrazine	N,N'-Diethylhydrazine	1615-80-1	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U087	O,O-Diethyl S-methyldithiophosphate	O,O-Diethyl S-methyldithiophosphate	3288-58-2	CARBN; or CMBST	CMBST
U088	Diethyl phthalate	Diethyl phthalate	84-66-2	0.20	28
U089	Diethyl stilbestrol	Diethyl stilbestrol	56-53-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U090	Dihydrosafrole	Dihydrosafrole	94-58-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U091	3,3'-Dimethoxybenzidine	3,3'-Dimethoxybenzidine	119-90-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U092	Dimethylamine	Dimethylamine	124-40-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U093	p-Dimethylaminoazobenzene	p-Dimethylaminoazobenzene	60-11-7	0.13	CMBST
U094	7,12-Dimethylbenz(a)anthracene	7,12-Dimethylbenz(a)anthracene	57-97-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

U095	3,3'-Dimethylbenzidine	3,3'-Dimethylbenzidine	119-93-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U096	alpha, alpha-Dimethyl benzyl hydroperoxide	alpha, alpha-Dimethyl benzyl hydroperoxide	80-15-9	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U097	Dimethylcarbamoyl chloride	Dimethylcarba-moyl chloride	79-44-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U098	1,1-Dimethylhydrazine	1,1-Dimethylhydrazine	57-14-7	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U099	1,2-Dimethylhydrazine	1,2-Dimethylhydrazine	540-73-8	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U101	2,4-Dimethylphenol	2,4-Dimethylphenol	105-67-9	0.036	14
U102	Dimethyl phthalate	Dimethyl phthalate	131-11-3	0.047	28
U103	Dimethyl sulfate	Dimethyl sulfate	77-78-1	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U105	2,4-Dinitrotoluene	2,4-Dinitrotoluene	121-14-2	0.32	140
U106	2,6-Dinitrotoluene	2,6-Dinitrotoluene	606-20-2	0.55	28
U107	Di-n-octyl phthalate	Di-n-octyl phthalate	117-84-0	0.017	28
U108	1,4-Dioxane	1,4-Dioxane	123-91-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
		1,4-Dioxane; alternate[6]	123-91-1	12.0	170
U109	1,2-Diphenylhydrazine	1,2-Diphenylhydrazine	122-66-7	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST

		1,2-Diphenylhydrazine; alternate[6] standard for wastewaters only	122-66-7	0.087	NA
U110	Dipropylamine	Dipropylamine	142-84-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U111	Di-n-propylnitrosamine	Di-n-propylnitrosamine	621-64-7	0.40	14
U112	Ethyl acetate	Ethyl acetate	141-78-6	0.34	33
U113	Ethyl acrylate	Ethyl acrylate	140-88-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U114	Ethylenebisdithio-carbamic acid salts and esters	Ethylenebisdithio-carbamic acid	111-54-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U115	Ethylene oxide	Ethylene oxide	75-21-8	(WETOX or CHOXD) fb CARBN; or CMBST	CHOXD; or CMBST
		Ethylene oxide; alternate[6] standard for wastewaters only	75-21-8	0.12	NA
U116	Ethylene thiourea	Ethylene thiourea	96-45-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U117	Ethyl ether	Ethyl ether	60-29-7	0.12	160
U118	Ethyl methacrylate	Ethyl methacrylate	97-63-2	0.14	160
U119	Ethyl methane sulfonate	Ethyl methane sulfonate	62-50-0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U120	Fluoranthene	Fluoranthene	206-44-0	0.068	3.4
U121	Trichloromonofluoromethane	Trichloromonofluoromethane	75-69-4	0.020	30

U122	Formaldehyde	Formaldehyde	50-00-0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U123	Formic acid	Formic acid	64-18-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U124	Furan	Furan	110-00-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U125	Furfural	Furfural	98-01-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U126	Glycidylaldehyde	Glycidylaldehyde	765-34-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U127	Hexachlorobenzene	Hexachloroben-zene	118-74-1	0.055	10
U128	Hexachlorobutadiene	Hexachlorobuta-diene	87-68-3	0.055	5.6
U129	Lindane	alpha-BHC	319-84-6	0.00014	0.066
		beta-BHC	319-85-7	0.00014	0.066
		delta-BHC	319-86-8	0.023	0.066
		gamma-BHC (Lindane)	58-89-9	0.0017	0.066
U130	Hexachlorocyclopenta-diene	Hexachlorocyclo-pentadiene	77-47-4	0.057	2.4
U131	Hexachloroethane	Hexachloroethane	67-72-1	0.055	30
U132	Hexachlorophene	Hexachlorophene	70-30-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U133	Hydrazine	Hydrazine	302-01-2	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST

U134	Hydrogen fluoride	Fluoride (measured in wastewaters only)	7664-39-3	35	ADGAS fb NEUTR; or NEUTR
U135	Hydrogen Sulfide	Hydrogen Sulfide	7783-06-4	CHOXD; CHRED, or CMBST	CHOXD; CHRED; or CMBST.
U136	Cacodylic acid	Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
U137	Indeno(1,2,3-cd)pyrene	Indeno(1,2,3-cd)pyrene	193-39-5	0.0055	3.4
U138	Iodomethane	Iodomethane	74-88-4	0.19	65
U140	Isobutyl alcohol	Isobutyl alcohol	78-83-1	5.6	170
U141	Isosafrole	Isosafrole	120-58-1	0.081	2.6
U142	Kepone	Kepone	143-50-8	0.0011	0.13
U143	Lasiocarpine	Lasiocarpine	303-34-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U144	Lead acetate	Lead	7439-92-1	0.69	0.75 mg/l TCLP
U145	Lead phosphate	Lead	7439-92-1	0.69	0.75 mg/l TCLP
U146	Lead subacetate	Lead	7439-92-1	0.69	0.75 mg/l TCLP
U147	Maleic anhydride	Maleic anhydride	108-31-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U148	Maleic hydrazide	Maleic hydrazide	123-33-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U149	Malononitrile	Malononitrile	109-77-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U150	Melphalan	Melphalan	148-82-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

U151	U151 (mercury) nonwastewaters that contain greater than or equal to 260 mg/kg total mercury.	Mercury	7439-97-6	NA	RMERC
	U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are residues from RMERC only.	Mercury	7439-97-6	NA	0.20 mg/l TCLP
	U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are not residues from RMERC.	Mercury	7439-97-6	NA	0.025 mg/l TCLP
	All U151 (mercury) wastewaters.	Mercury	7439-97-6	0.15	NA
	Elemental Mercury Contaminated with Radioactive Materials	Mercury	7439-97-6	NA	AMLGM
U152	Methacrylonitrile	Methacrylonitrile	126-98-7	0.24	84
U153	Methanethiol	Methanethiol	74-93-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U154	Methanol	Methanol	67-56-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
		Methanol; alternate[6] set of standards for both wastewaters and nonwastewaters	67-56-1	5.6	0.75 mg/l TCLP
U155	Methapyrilene	Methapyrilene	91-80-5	0.081	1.5
U156	Methyl chlorocarbonate	Methyl chlorocarbonate	79-22-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U157	3-Methylcholanthrene	3-Methylcholanth-rene	56-49-5	0.0055	15
U158	4,4'-Methylene bis(2-chloroaniline)	4,4'-Methylene bis(2-chloroaniline)	101-14-4	0.50	30

U159	Methyl ethyl ketone	Methyl ethyl ketone	78-93-3	0.28	36
U160	Methyl ethyl ketone peroxide	Methyl ethyl ketone peroxide	1338-23-4	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U161	Methyl isobutyl ketone	Methyl isobutyl ketone	108-10-1	0.14	33
U162	Methyl methacrylate	Methyl methacrylate	80-62-6	0.14	160
U163	N-Methyl N'-nitro N-nitrosoguanidine	N-Methyl N'-nitro N-nitrosoguanidine	70-25-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U164	Methylthiouracil	Methylthiouracil	56-04-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U165	Naphthalene	Naphthalene	91-20-3	0.059	5.6
U166	1,4-Naphthoquinone	1,4-Naphthoquinone	130-15-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U167	1-Naphthylamine	1-Naphthylamine	134-32-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U168	2-Naphthylamine	2-Naphthylamine	91-59-8	0.52	CMBST
U169	Nitrobenzene	Nitrobenzene	98-95-3	0.068	14
U170	p-Nitrophenol	p-Nitrophenol	100-02-7	0.12	29
U171	2-Nitropropane	2-Nitropropane	79-46-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U172	N-Nitrosodi-n-butylamine	N-Nitrosodi-n-butylamine	924-16-3	0.40	17
U173	N-Nitrosodiethanolamine	N-Nitrosodiethanolamine	1116-54-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U174	N-Nitrosodiethylamine	N-Nitrosodiethylamine	55-18-5	0.40	28

U176	N-Nitroso-N-ethylurea	N-Nitroso-N-ethylurea	759-73-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U177	N-Nitroso-N-methylurea	N-Nitroso-N-methylurea	684-93-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U178	N-Nitroso-N-methylurethane	N-Nitroso-N-methylurethane	615-53-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U179	N-Nitrosopiperidine	N-Nitrosopiperidine	100-75-4	0.013	35
U180	N-Nitrosopyrrolidine	N-Nitrosopyrrolidine	930-55-2	0.013	35
U181	5-Nitro-o-toluidine	5-Nitro-o-toluidine	99-55-8	0.32	28
U182	Paraldehyde	Paraldehyde	123-63-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U183	Pentachlorobenzene	Pentachloroben-zene	608-93-5	0.055	10
U184	Pentachloroethane	Pentachloroeth-ane	76-01-7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
		Pentachloroethane; alternate[6] standards for both wastewaters and nonwastewaters	76-01-7	0.055	6.0
U185	Pentachloronitrobenzene	Pentachloronitro-benzene	82-68-8	0.055	4.8
U186	1,3-Pentadiene	1,3-Pentadiene	504-60-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U187	Phenacetin	Phenacetin	62-44-2	0.081	16
U188	Phenol	Phenol	108-95-2	0.039	6.2

U189	Phosphorus sulfide	Phosphorus sulfide	1314-80-3	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
U190	Phthalic anhydride (measured as Phthalic acid or Terephthalic acid	Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	100-21-0	0.055	28
		Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	85-44-9	0.055	28
U191	2-Picoline	2-Picoline	109-06-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U192	Pronamide	Pronamide	23950-58-5	0.093	1.5
U193	1,3-Propane sultone	1,3-Propane sultone	1120-71-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U194	n-Propylamine	n-Propylamine	107-10-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U196	Pyridine	Pyridine	110-86-1	0.014	16
U197	p-Benzoquinone	p-Benzoquinone	106-51-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U200	Reserpine	Reserpine	50-55-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U201	Resorcinol	Resorcinol	108-46-3	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U202	Saccharin and salts	Saccharin	81-07-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U203	Safrole	Safrole	94-59-7	0.081	22

U204	Selenium dioxide	Selenium	7782-49-2	0.82	5.7 mg/l TCLP
U205	Selenium sulfide	Selenium	7782-49-2	0.82	5.7 mg/l TCLP
U206	Streptozotocin	Streptozotocin	18883-66-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U207	1,2,4,5-Tetrachlorobenzene	1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14
U208	1,1,1,2-Tetrachloroethane	1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
U209	1,1,2,2-Tetrachloroethane	1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0
U210	Tetrachloroethylene	Tetrachloroethy-lene	127-18-4	0.056	6.0
U211	Carbon tetrachloride	Carbon tetrachloride	56-23-5	0.057	6.0
U213	Tetrahydrofuran	Tetrahydrofuran	109-99-9	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U214	Thallium (I) acetate	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
U215	Thallium (I) carbonate	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
U216	Thallium (I) chloride	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
U217	Thallium (I) nitrate	Thallium (measured in wastewaters only)	7440-28-0	1.4	RTHRM; or STABL
U218	Thioacetamide	Thioacetamide	62-55-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

U219	Thiourea	Thiourea	62-56-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U220	Toluene	Toluene	108-88-3	0.080	10
U221	Toluenediamine	Toluenediamine	25376-45-8	CARBN; or CMBST	CMBST
U222	o-Toluidine hydrochloride	o-Toluidine hydrochloride	636-21-5	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U223	Toluene diisocyanate	Toluene diisocyanate	26471-62-5	CARBN; or CMBST	CMBST
U225	Bromoform (Tribromomethane)	Bromoform (Tribromometh-ane)	75-25-2	0.63	15
U226	1,1,1-Trichloroethane	1,1,1-Trichloroethane	71-55-6	0.054	6.0
U227	1,1,2-Trichloroethane	1,1,2-Trichloroethane	79-00-5	0.054	6.0
U228	Trichloroethylene	Trichloroethylene	79-01-6	0.054	6.0
U234	1,3,5-Trinitrobenzene	1,3,5-Trinitrobenzene	99-35-4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U235	tris-(2,3-Dibromopropyl)-phosphate	tris-(2,3-Dibromopropyl)-phosphate	126-72-7	0.11	0.10
U236	Trypan Blue	Trypan Blue	72-57-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U237	Uracil mustard	Uracil mustard	66-75-1	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U238	Urethane (Ethyl carbamate)	Urethane (Ethyl carbamate)	51-79-6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U239	Xylenes	Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30

U240	2,4-D (2,4-Dichlorophenoxyacetic acid)	2,4-D (2,4-Dichlorophenoxy-acetic acid)	94-75-7	0.72	10
	2,4-D (2,4-Dichlorophenoxyacetic acid) salts and esters		NA	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U243	Hexachloropropylene	Hexachloropropy-lene	1888-71-7	0.035	30
U244	Thiram	Thiram	137-26-8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U246	Cyanogen bromide	Cyanogen bromide	506-68-3	CHOXD; WETOX; or CMBST	CHOXD; WETOX; or CMBST
U247	Methoxychlor	Methoxychlor	72-43-5	0.25	0.18
U248	Warfarin, & salts, when present at concentrations of 0.3% or less	Warfarin	81-81-2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U249	Zinc phosphide, Zn_3P_2, when present at concentrations of 10% or less	Zinc Phosphide	1314-84-7	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
U271	Benomyl	Benomyl	17804-35-2	0.056	1.4
U278	Bendiocarb	Bendiocarb	22781-23-3	0.056	1.4
U279	Carbaryl	Carbaryl	63-25-2	0.006	0.14
U280	Barban	Barban	101-27-9	0.056	1.4
U328	o-Toluidine	o-Toluidine	95-53-4	CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN.	CMBST
U353	p-Toluidine	p-Toluidine	106-49-0	CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN	CMBST

U359	2-Ethoxyethanol	2-Ethoxyethanol	110-80-5	CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN	CMBST
U364	Bendiocarb phenol [10]	Bendiocarb phenol	22961-82-6	0.056	1.4
U367	Carbofuran phenol	Carbofuran phenol	1563-38-8	0.056	1.4
U372	Carbendazim	Carbendazim	10605-21-7	0.056	1.4
U373	Propham	Propham	122-42-9	0.056	1.4
U387	Prosulfocarb	Prosulfocarb	52888-80-9	0.042	1.4
U389	Triallate	Triallate	2303-17-5	0.042	1.4
U394	A2213[10]	A2213	30558-43-1	0.042	1.4
U395	Diethylene glycol, dicarbamate [10]	Diethylene glycol, dicarbamate	5952-26-1	0.056	1.4
U404	Triethylamine	Triethylamine	121-44-8	0.081	1.5
U409	Thiophanate-methyl	Thiophanate-methyl	23564-05-8	0.056	1.4
U410	Thiodicarb	Thiodicarb	59669-26-0	0.019	1.4
U411	Propoxur	Propoxur	114-26-1	0.056	1.4

FOOTNOTES TO TREATMENT STANDARDS TABLE

1 The waste descriptions provided in this table do not replace waste descriptions in Rule 0400-12-01-.02. Descriptions of Treatment/Regulatory Subcategories are provided, as needed, to distinguish between applicability of different standards.

2 CAS means Chemical Abstract Services. When the waste code and/or regulated constituents are described as a combination of a chemical with its salts and/or esters, the CAS number is given for the parent compound only.

3 Concentration standards for wastewaters are expressed in mg/L and are based on analysis of composite samples.

4 All treatment standards expressed as a Technology Code or combination of Technology Codes are explained in detail in subparagraph (3)(c) of this rule Table 1 - Technology Codes and Descriptions of Technology-Based Standards.

5 Except for Metals (EP or TCLP) and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units

operated in accordance with the technical requirements of Rule 0400-12-01-.06(15), or Rule 0400-12-01-.05(15), or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in part 4 of this subparagraph. All concentration standards for nonwastewaters are based on analysis of grab samples.

6 Where an alternate treatment standard or set of alternate standards has been indicated, a facility may comply with this alternate standard, but only for the Treatment/Regulatory Subcategory or physical form (i.e., wastewater and/or nonwastewater) specified for that alternate standard.

7 Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using Method 9010C or 9012B, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, listed in 40 CFR 260.11; Rule 0400-12-01-.01(2)(b)1, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.

8 These wastes, when rendered nonhazardous and then subsequently managed in CWA or CWA-equivalent systems, are not subject to treatment standards. (See subparts (1)(a)3(iii) and (iv) of this rule.)

9 These wastes, when rendered nonhazardous and then subsequently injected in a Class I SDWA well, are not subject to treatment standards. (See 40 CFR 148.1(d).)

10 The treatment standard for this waste may be satisfied by either meeting the constituent concentrations in this table or by treating the waste by the specified technologies: combustion, as defined by the technology code CMBST at subparagraph (c) Table 1 of this paragraph for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at subparagraph (c) Table 1 of this paragraph for wastewaters.

11 For these wastes, the definition of CMBST is limited to: (1) combustion units operating under Rule 0400-12-01-.09, (2) combustion units permitted under Rule 0400-12-01-.06(15), or (3) combustion units operating under Rule 0400-12-01-.05(15), which have obtained a determination of equivalent treatment under part (c)2 of this paragraph.

12 Disposal of K175 wastes that have complied with all applicable treatment standards this subparagraph must also be macroencapsulated in accordance with subparagraph (f) of this paragraph Table 1 unless the waste is placed in:

(i) A hazardous waste (Subtitle C) monofill containing only K175 wastes that meet all applicable treatment standards of this subparagraph; or

(ii) A dedicated hazardous waste (Subtitle C) landfill cell in which all other wastes being co-disposed are at pH ≤6.0.

(b) Treatment Standards Expressed as Concentrations in Waste Extract [40 CFR 268.41]

For the requirements previously found in this paragraph and for treatment standards in Table CCWE-Constituent Concentrations in Waste Extracts, refer to subparagraph (a) of this paragraph.

(c) Treatment Standards Expressed as Specified Technologies [40 CFR 268.42]

(Note: For the requirements previously found in this paragraph in Table 2-Technology-Based Standards By RCRA Waste Code, and Table 3-Technology-Based Standards for Specific Radioactive Hazardous Mixed Waste, refer to subparagraph (a) of this paragraph.)

1. The following wastes in the table in subparagraph (a) of this paragraph "Treatment Standards for Hazardous Wastes," for which standards are expressed as a treatment method rather than a concentration level, must be treated using the technology or technologies specified in the table entitled "Technology Codes and Description of Technology-Based Standards" in this subparagraph.

TABLE 1.[a]-TECHNOLOGY CODES AND DESCRIPTION OF TECHNOLOGY-BASED STANDARDS

Technology Code	Description of Technology-based Standards
ADGAS:	Venting of compressed gases into an absorbing or reacting media (i.e., solid or liquid)-venting can be accomplished through physical release utilizing valves/piping; physical penetration of the container; and/or penetration through detonation.
AMLGM:	Amalgamation of liquid, elemental mercury contaminated with radioactive materials utilizing inorganic reagents such as copper, zinc, nickel, gold, and sulfur that result in a nonliquid, semi-solid amalgam and thereby reducing potential emissions of elemental mercury vapors to the air.
BIODG:	Biodegradation of organics or non-metallic inorganics (i.e., degradable inorganics that contain the elements of phosphorus, nitrogen, and sulfur) in units operated under either aerobic or anaerobic conditions such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the biodegradation of many organic constituents that cannot be directly analyzed in wastewater residues).
CARBN:	Carbon adsorption (granulated or powdered) of non-metallic inorganics, organo-metallics, and/or organic constituents, operated such that a surrogate compound or indicator parameter has not undergone breakthrough (e.g., Total Organic Carbon can often be used as an indicator parameter for the adsorption of many organic constituents that cannot be directly analyzed in wastewater residues). Breakthrough occurs when the carbon has become saturated with the constituent (or indicator parameter) and substantial change in adsorption rate associated with that constituent occurs.
CHOXD:	Chemical or electrolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combinations of reagents: (1) Hypochlorite (e.g. bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permanganates; and/or (9) other oxidizing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues). Chemical oxidation specifically includes what is commonly referred to as alkaline chlorination.
CHRED:	Chemical reduction utilizing the following reducing reagents (or waste reagents) or combinations of reagents: (1) Sulfur dioxide; (2) sodium, potassium, or alkali salts or sulfites, bisulfites, metabisulfites, and polyethylene glycols (e.g., NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; and/or (5) other reducing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Halogens can often be used as an indicator parameter for the reduction of many halogenated organic constituents that cannot be directly analyzed in wastewater residues). Chemical reduction is commonly used for the reduction of hexavalent chromium to the trivalent state.
CMBST:	High temperature organic destruction technologies, such as combustion in incinerators, boilers, or industrial furnaces operated in accordance with the applicable requirements of Rules 0400-12-01-.05(15), .06(15) or .09(8) and in other units operated in accordance with applicable technical operating requirements; and certain non-combustive technologies, such as the Catalytic Extraction Process.
DEACT:	Deactivation to remove the hazardous characteristics of a waste due to is ignitability, corrosivity, and/or reactivity.

FSUBS:	Fuel substitution in units operated in accordance with applicable technical operating requirements.
HLVIT:	Vitrification of high level mixed radioactive wastes in units in compliance with all applicable radioactive protection requirements under control of the Nuclear Regulatory Commission.
IMERC:	Incineration of wastes containing organics and mercury in units operated in accordance with the technical operating requirements of Rules 0400-12-01-.06(15) and .05(15). All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (e.g., High or Low Mercury Subcategories).
INCIN:	Incineration in units operated in accordance with the technical operating requirements of Rules 0400-12-01-.05(15) and .06(15).
LLEXT:	Liquid-liquid extraction (often referred to as solvent extraction) of organics from liquid wastes into an immiscible solvent for which the hazardous constituents have a greater solvent affinity, resulting in an extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and a raffinate (extracted liquid waste) proportionately low in organics that must undergo further treatment as specified in the standard.
MACRO:	Macroencapsulation with surface coating materials such as polymeric organics (e.g. resins and plastics) or with a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media. Macroencapsulation specifically does not include any material that would be classified as a tank or container according to Rule 0400-12-01-.01(2)(a).
NEUTR:	Neutralization with the following reagents (or waste reagents) or combinations of reagents: (1) Acids; (2) bases; or (3) water (including wastewaters) resulting in a pH greater than 2 but less than 12.5 as measured in the aqueous residuals.
NLDBR:	No land disposal based on recycling.
POLYM:	Formation of complex high-molecular weight solids through polymerization of monomers in high-TOC D001 non-wastewaters which are chemical components in the manufacture of plastics.
PRECP:	Chemical precipitation of metals and other inorganics as insoluble precipitates of oxides, hydroxides, carbonates, sulfides, sulfates, chlorides, flourides, or phosphates. The following reagents (or waste reagents) are typically used alone or in combination: (1) Lime (i.e., containing oxides and/or hydroxides of calcium and/or magnesium; (2) caustic (i.e., sodium and/or potassium hydroxides; (3) soda ash (i.e., sodium carbonate); (4) sodium sulfide; (5) ferric sulfate or ferric chloride; (6) alum; or (7) sodium sulfate. Additional flocculating, coagulation or similar reagents/processes that enhance sludge dewatering characteristics are not precluded from use.
RBERY:	Thermal recovery of Beryllium.
RCGAS:	Recovery/reuse of compressed gases including techniques such as reprocessing of the gases for reuse/resale; filtering/adsorption of impurities; remixing for direct reuse or resale; and use of the gas as a fuel source.
RCORR:	Recovery of acids or bases utilizing one or more of the following recovery technologies: (1) Distillation (i.e., thermal concentration); (2) ion exchange; (3) resin or solid adsorption; (4) reverse osmosis; and/or (5) incineration for the recovery of acid-Note: this does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.
RLEAD:	Thermal recovery of lead in secondary lead smelters.

RMERC:	Retorting or roasting in a thermal processing unit capable of volatilizing mercury and subsequently condensing the volatilized mercury for recovery. The retorting or roasting unit (or facility) must be subject to one or more of the following: (a) a National Emissions Standard for Hazardous Air Pollutants (NESHAP) for mercury; (b) a Best Available Control Technology (BACT) or a Lowest Achievable Emission Rate (LAER) standard for mercury imposed pursuant to a Prevention of Significant Deterioration (PSD) permit; or (c) a state permit that establishes emission limitations (within meaning of section 302 of the Clean Air Act) for mercury. All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (e.g., High or Low Mercury Subcategories).
RMETL:	Recovery of metals or inorganics utilizing one or more of the following direct physical/removal technologies: (1) Ion exchange; (2) resin or solid (i.e., zeolites) adsorption; (3) reverse osmosis; (4) chelation/solvent extraction; (5) freeze crystallization; (6) ultrafiltration and/or (7) simple precipitation (i.e., crystallization) - Note: This does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.
RORGS:	Recovery of organics utilizing one or more of the following technologies: (1) Distillation; (2) thin film evaporation; (3) steam stripping; (4) carbon adsorption; (5) critical fluid extraction; (6) liquid-liquid extraction; (7) precipitation/ crystallization (including freeze crystallization); or (8) chemical phase separation techniques (i.e., addition of acids, bases, demulsifiers, or similar chemicals); - Note: this does not preclude the use of other physical phase separation techniques such as a decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.
RTHRM:	Thermal recovery of metals or inorganics from nonwastewaters in units identified as industrial furnaces according to 0400-12-01-.01(2)(a) under the definition of "industrial furnaces".
RZINC:	Resmelting in high temperature metal recovery units for the purpose of recovery of zinc.
STABL:	Stabilization with the following reagents (or waste reagents) or combinations of reagents: (1) Portland cement; or (2) lime/pozzolans (e.g., fly ash and cement kiln dust) - this does not preclude the addition of reagents (e.g., iron salts, silicates, and clays) designed to enhance the set/cure time and/or compressive strength, or to overall reduce the leachability of the metal or inorganic.
SSTRP:	Steam stripping of organics from liquid wastes utilizing direct application of steam to the wastes operated such that liquid and vapor flow rates, as well as temperature and pressure ranges, have been optimized, monitored, and maintained. These operating parameters are dependent upon the design parameters of the unit such as the number of separation stages and the internal column design, thus resulting in a condensed extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and an extracted wastewater that must undergo further treatment as specified in the standard.
WETOX:	Wet air oxidation performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues).
WTRRX:	Controlled reaction with water for highly reactive inorganic or organic chemicals with precautionary controls for protection of workers from potential violent reactions as well as precautionary controls for potential emissions of

	toxic/ignitable levels of gases released during the reaction.

FOOTNOTE:[a] All rule citations contained herein are from Chapter 0400-12-01.

(Note 1: When a combination of these technologies (i.e., a treatment train) is specified as a single treatment standard, the order of application is specified in Table 2 of this subparagraph by indicating the five letter technology code that must be applied first, then the designation "fb." (An abbreviation for "followed by"), then the five letter technology code for the technology that must be applied next, and so on.)

(Note 2: When more than one technology (or treatment train) are specified as alternative treatment standards, the five letter technology codes (or the treatment trains) are separated by a semicolon (;) with the last technology preceded by the word "or". This indicates that any one of these BDAT technologies or treatment trains can be used for compliance with the standard.)

2. (Reserved) [40 CFR 268.42(b)]

(Note: The authority for implementing 40 CFR 268.42(b) that any person may apply to the Administrator to use an alternative treatment method that can achieve performance equivalent to that achieved by methods specified in parts 1, 3, and 4 of this subparagraph [paragraphs (a), (c), and (d) of 40 CFR 268.42] for wastes or specified in Table 1 of paragraph (f) of this rule [Table 1 of 40 CFR 268.45] for hazardous debris and that, if the Administrator approves, such approval must be stated in writing and may contain provisions and conditions as the Administrator deems appropriate and with which the applicant must comply remains with the U.S. Environmental Protection Agency.)

3. As an alternative to the otherwise applicable treatment standards of this paragraph, lab packs are eligible for land disposal provided the following requirements are met:

(i) The lab packs comply with the applicable provisions of Rule 0400-12-01-.06(14)(q) and Rule 0400-12-01-.05(14)(q);

(ii) The lab pack does not contain any of the wastes listed in Appendix IV to subparagraph (5)(a) of this rule;

(iii) The lab packs are incinerated in accordance with the requirements of Rule 0400-12-01-.06(15) or Rule 0400-12-01-.05(15); and

(iv) Any incinerator residues from lab packs containing D004, D005, D006, D007, D008, D010, and D011 are treated in compliance with the applicable treatment standards specified for such wastes in this paragraph.

4. Radioactive hazardous mixed wastes are subject to the treatment standards in subparagraph (a) of this paragraph. Where treatment standards are specified for radioactive mixed wastes in the Table of Treatment Standards, those treatment standards will govern. Where there is no specific treatment standard for radioactive mixed waste, the treatment standard for the hazardous waste (as designated by EPA waste code) applies. Hazardous debris containing radioactive waste is subject to the treatment standards specified in subparagraph (f) of this paragraph.

(d) Treatment Standards Expressed as Waste Concentrations [40 CFR 268.43]

For the requirements previously found in this subparagraph and for treatment standards in Table CCW-Constituent Concentrations in Wastes, refer to subparagraph (a) of this paragraph.

(e) (Reserved) Variance From a Treatment Standard [40 CFR 268.44]

(Note: The authority for implementing this subparagraph [40 CFR 268.44] Variance from a Treatment Standard remains with the U.S. Environmental Protection Agency.)

(f) Treatment Standards for Hazardous Debris [40 CFR 268.45]

1. Treatment standards

Hazardous debris must be treated prior to land disposal as follows unless Department determines under Rule 0400-12-01-.02(1)(c)6(ii) that the debris is no longer contaminated with hazardous waste or the debris is treated to the waste-specific treatment standard provided in this subparagraph for the waste contaminating the debris:

(i) General

Hazardous debris must be treated for each "contaminant subject to treatment" defined by part 2 of this subparagraph using the technology or technologies identified in Table 1 of this subparagraph.

(ii) Characteristic debris

Hazardous debris that exhibits the characteristic of ignitability, corrosivity, or reactivity identified under Rules 0400-12-01-.02(3)(b), (c) and (d), respectively, must be deactivated by treatment using one of the technologies identified in Table 1 of this subparagraph.

(iii) Mixtures of debris types

The treatment standards of Table 1 in this subparagraph must be achieved for each type of debris contained in a mixture of debris types. If an immobilization technology is used in a treatment train, it must be the last treatment technology used.

(iv) Mixtures of contaminant types

Debris that is contaminated with two or more contaminants subject to treatment identified under part 2 of this subparagraph must be treated for each contaminant using one or more treatment technologies identified in Table 1 of this subparagraph. If an immobilization technology is used in a treatment train, it must be the last treatment technology used.

(v) Waste PCBs

Hazardous debris that is also a waste PCB under 40 CFR part 761 is subject to the requirements of either 40 CFR part 761 or the requirements of this subparagraph, whichever are more stringent.

2. Contaminants subject to treatment

Hazardous debris must be treated for each "contaminant subject to treatment." The contaminants subject to treatment must be determined as follows:

(i) Toxicity characteristic debris

The contaminants subject to treatment for debris that exhibits the Toxicity Characteristic (TC) by Rule 0400-12-01-.02(3)(e) are those EP constituents for which the debris exhibits the TC toxicity characteristic.

(ii) Debris contaminated with listed waste

The contaminants subject to treatment for debris that is contaminated with a prohibited listed hazardous waste are those constituents or wastes for which treatment standards are established for the waste under subparagraph (a) of this paragraph.

(iii) Cyanide reactive debris

Hazardous debris that is reactive because of cyanide must be treated for cyanide.

3. Conditioned exclusion of treated debris

Hazardous debris that has been treated using one of the specified extraction or destruction technologies in Table 1 of this subparagraph and that does not exhibit a characteristic of hazardous waste identified under Rule 0400-12-01-.02(3) after treatment is not a hazardous waste and need not be managed in a subtitle C facility. Hazardous debris contaminated with a listed waste that is treated by an immobilization technology specified in Table 1 is a hazardous waste and must be managed in a subtitle C facility.

4. Treatment residuals

(i) General requirements

Except as provided by subparts (ii) and (iv) of this part:

(I) Residue from the treatment of hazardous debris must be separated from the treated debris using simple physical or mechanical means; and

(II) Residue from the treatment of hazardous debris is subject to the waste-specific treatment standards provided by this paragraph for the waste contaminating the debris.

(ii) Nontoxic debris

Residue from the deactivation of ignitable, corrosive, or reactive characteristic hazardous debris (other than cyanide-reactive) that is not contaminated with a contaminant subject to treatment defined by part 2 of this subparagraph, must be deactivated prior to land disposal and is not subject to the waste-specific treatment standards of this paragraph.

(iii) Cyanide-reactive debris

Residue from the treatment of debris that is reactive because of cyanide must meet the treatment standards for D003 in "Treatment Standards for Hazardous Wastes" at subparagraph (a) of this paragraph.

(iv) Ignitable nonwastewater residue

Ignitable nonwastewater residue containing equal to or greater than 10% total organic carbon is subject to the technology specified in the treatment standard for D001: Ignitable Liquids.

(v) Residue from spalling

Layers of debris removed by spalling are hazardous debris that remain subject to the treatment standards of this subparagraph.

[a]TABLE 1.-ALTERNATIVE TREATMENT STANDARDS FOR HAZARDOUS DEBRIS [1]

Technology Description	Performance and/or Design and Operating Standard	Contaminant Restrictions[2]
A. Extraction Technologies:		
1. Physical Extraction		
a. Abrasive Blasting: Removal	Glass, Metal, Plastic, Rubber:	All Debris: None.

of contaminated debris surface layers using water and/or air pressure to propel a solid media (e.g., steel shot, aluminum oxide grit, plastic beads).	Treatment to a clean debris surface.[3] Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Removal of at least 0.6 cm of the surface layer; treatment to a clean debris surface.[3]	
b. Scarification, Grinding, and Planing: Process utilizing striking piston heads, saws, or rotating grinding wheels such that contaminated debris surface layers are removed.	Same as above.	Same as above.
c. Spalling: Drilling or chipping holes at appropriate locations and depth in the contaminated debris surface and applying a tool which exerts a force on the sides of those holes such that the surface layer is removed. The surface layer removed remains hazardous debris subject to the debris treatment standards.	Same as above.	Same as above.
d. Vibratory Finishing: Process utilizing scrubbing media, flushing fluid, and oscillating energy such that hazardous contaminants or contaminated debris surface layers are removed.[4]	Same as above.	Same as above.
e. High Pressure Steam and Water Sprays: Application of water or steam sprays of sufficient temperature, pressure, residence time, agitation, surfactants, and detergents to remove hazardous contaminants from debris surfaces or to remove contaminated debris surface layers.	Same as above.	Same as above.
2. Chemical Extraction		
a. Water Washing and Spraying: Application of water sprays or water baths of sufficient temperature, pressure, residence time, agitation, surfactants, acids, bases, and detergents to remove hazardous contaminants from debris surfaces and surface pores or to remove contaminated debris surface layers.	All Debris: Treatment to a clean debris surface[3]; Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 1.2 cm (1/2 inch) in one dimension (i.e., thickness limit,[5] except that this thickness limit may be waived under an "Equivalent Technology" approval under .10(3)(c)2[8] debris surfaces must be in contact with water solution	Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Contaminant must be soluble to at least 5% by weight in water solution or 5% by weight in emulsion; if debris is contaminated with a dioxin-listed waste,[6] an "Equivalent Technology" approval under .10(3)(c)2[8] must be obtained.[8]

	for at least 15 minutes	
b. Liquid Phase Solvent Extraction: Removal of hazardous contaminants from debris surfaces and surface pores by applying a nonaqueous liquid or liquid solution which causes the hazardous contaminants to enter the liquid phase and be flushed away from the debris along with the liquid or liquid solution while using appropriate agitation, temperature, and residence time.[4]	Same as above.	Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Same as above, except that contaminant must be soluble to at least 5% by weight in the solvent.
c. Vapor Phase Solvent Extraction: Application of an organic vapor using sufficient agitation, residence time, and temperature to cause hazardous contaminants on contaminated debris surfaces and surface pores to enter the vapor phase and be flushed away with the organic vapor.[4]	Same as above, except that brick, cloth, concrete, paper, pavement, rock and wood surfaces must be in contact with the organic vapor for at least 60 minutes.	Same as above.
3. Thermal Extraction		
a. High Temperature Metals Recovery: Application of sufficient heat, residence time, mixing, fluxing agents, and/or carbon in a smelting, melting, or refining furnace to separate metals from debris.	For refining furnaces, treated debris must be separated from treatment residuals using simple physical or mechanical means,[9] and, prior to further treatment, such residuals must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.	Debris contaminated with a dioxin-listed waste:[5] Obtain an "Equivalent Technology" approval under .10(3)(c)2[8].
b. Thermal Desorption: Heating in an enclosed chamber under either oxidizing or nonoxidizing atmospheres at sufficient temperature and residence time to vaporize hazardous contaminants from contaminated surfaces and surface pores and to remove the contaminants from the heating chamber in a gaseous exhaust gas.[7]	All Debris: Obtain an "Equivalent Technology" approval under .10(3)(c)2[8]; treated debris must be separated from treatment residuals using simple physical or mechanical means,[9] and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris. Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 10 cm (4 inches) in one dimension (i.e., thickness limit),[5] except that this thickness limit may be waived under the "Equivalent Technology" approval	All Debris: Metals other than mercury.
B. Destruction Technologies:		

1. Biological Destruction (Biodegradation): Removal of hazardous contaminants from debris surfaces and surface pores in an aqueous solution and biodegration of organic or nonmetallic inorganic compounds (i.e., inorganics that contain phosphorus, nitrogen, or sulfur) in units operated under either aerobic or anaerobic conditions.	All Debris: Obtain an "Equivalent Technology" approval under .10(3)(c)2[8]; treated debris must be separated from treatment residuals using simple physical or mechanical means,[9] and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris. Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 1.2 cm (1/2 inch) in one dimension (i.e., thickness limit),[5] except that this thickness limit may be waived under the "Equivalent Technology" approval	All Debris: Metal contaminants.
2. Chemical Destruction		
a. Chemical Oxidation: Chemical or electrolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combination of reagents-(1) hypochlorite (e.g., bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permanganates; and/or (9) other oxidizing reagents of equivalent destruction efficiency.[4] Chemical oxidation specifically includes what is referred to as alkaline chlorination.	All Debris: Obtain an "Equivalent Technology" approval under .10(3)(c)2[8] treated debris must be separated from treatment residuals using simple physical or mechanical means,[9] and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris. Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 1.2 cm (1/2 inch) in one dimension (i.e., thickness limit),[5] except that this thickness limit may be waived under the "Equivalent Technology" approval	All Debris: Metal contaminants.
b. Chemical Reduction: Chemical reaction utilizing the following reducing reagents (or waste reagents) or combination of reagents: (1) sulfur dioxide; (2) sodium, potassium, or alkali salts of sulfites, bisulfites, and metabisulfites, and polyethylene glycols (e.g., NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; and/or (5) other reducing reagents of equivalent efficiency.[4]	Same as above.	Same as above.
3. Thermal Destruction:	Treated debris must be	Brick, Concrete, Glass, Metal,

Treatment in an incinerator operating in accordance with .05(15) or .06(15), a boiler or industrial furnace operating in accordance with .09(8), or other thermal treatment unit operated in accordance with .06(27) or .05(16), but excluding for purposes of these debris treatment standards Thermal Desorption units.	separated from treatment residuals using simple physical or mechanical means,[9] and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.	Pavement, Rock, Metal: Metals other than mercury, except that there are no metal restrictions for vitrification. Debris contaminated with a dioxin-listed waste.[6] Obtain an "Equivalent Technology" approval under .10(3)(c),[8] except that this requirement does not apply to vitrification.
C. Immobilization Technologies:		
1. Macroencapsulation: Application of surface coating materials such as polymeric organics (e.g., resins and plastics) or use of a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media.	Encapsulating material must completely encapsulate debris and be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other waste, microbes).	None.
2. Microencapsulation: Stabilization of the debris with the following reagents (or waste reagents) such that the leachability of the hazardous contaminants is reduced: (1) Portland cement; or (2) lime/ pozzolans (e.g., fly ash and cement kiln dust). Reagents (e.g., iron salts, silicates, and clays) may be added to enhance the set/cure time and/or compressive strength, or to reduce the leachability of the hazardous constituents.[5]	Leachability of the hazardous contaminants must be reduced.	None.
3. Sealing: Application of an appropriate material which adheres tightly to the debris surface to avoid exposure of the surface to potential leaching media. When necessary to effectively seal the surface, sealing entails pretreatment of the debris surface to remove foreign matter and to clean and roughen the surface. Sealing materials include epoxy, silicone, and urethane compounds, but paint may not be used as a sealant	Sealing must avoid exposure of the debris surface to potential leaching media and sealant must be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other waste, microbes).	None.

FOOTNOTE:[a] All rule citations contained herein are from Chapter 0400-12-01.

FOOTNOTE:[1] Hazardous debris must be treated by either these standards or the waste-specific treatment standards for the waste contaminating the debris. The treatment standards must be met for each type of debris contained in a mixture of debris types, unless the debris is converted into treatment

residue as a result of the treatment process. Debris treatment residuals are subject to the waste-specific treatment standards for the waste contaminating the debris.

FOOTNOTE:[2] Contaminant restriction means that the technology is not BDAT for that contaminant. If debris containing a restricted contaminant is treated by the technology, the contaminant must be subsequently treated by a technology for which it is not restricted in order to be land disposed (and excluded from Subtitle C regulation).

FOOTNOTE:[3] "Clean debris surface" means the surface, when viewed without magnification, shall be free of all visible contaminated soil and hazardous waste except that residual staining from soil and waste consisting of light shadows, slight streaks, or minor discolorations, and soil and waste in cracks, crevices, and pits may be present provided that such staining and waste and soil in cracks, crevices, and pits shall be limited to no more than 5% of each square inch of surface area.

FOOTNOTE:[4] Acids, solvents, and chemical reagents may react with some debris and contaminants to form hazardous compounds. For example, acid washing of cyanide-contaminated debris could result in the formation of hydrogen cyanide. Some acids may also react violently with some debris and contaminants, depending on the concentration of the acid and the type of debris and contaminants. Debris treaters should refer to the safety precautions specified in Material Safety Data Sheets for various acids to avoid applying an incompatible acid to a particular debris/contaminant combination. For example, concentrated sulfuric acid may react violently with certain organic compounds, such as acrylonitrile.

FOOTNOTE:[5] If reducing the particle size of debris to meet the treatment standards results in material that no longer meets the 60 mm minimum particle size limit for debris, such material is subject to the waste-specific treatment standards for the waste contaminating the material, unless the debris has been cleaned and separated from contaminated soil and waste prior to size reduction. At a minimum, simple physical or mechanical means must be used to provide such cleaning and separation of nondebris materials to ensure that the debris surface is free of caked soil, waste, or other nondebris material.

FOOTNOTE:[6] Dioxin-listed wastes are EPA Hazardous Waste numbers F020, F021, F022, F023, F026, and F027.

FOOTNOTE:[7] Thermal desorption is distinguished from Thermal Destruction in that the primary purpose of Thermal Desorption is to volatilize contaminants and to remove them from the treatment chamber for subsequent destruction or other treatment.

FOOTNOTE:[8] The demonstration "Equivalent Technology" under part (c)2 of this paragraph must document that the technology treats contaminants subject to treatment to a level equivalent to that required by the performance and design and operating standards for other technologies in this table such that residual levels of hazardous contaminants will not pose a hazard to human health and the environment absent management controls.

FOOTNOTE:[9] Any soil, waste, and other nondebris material that remains on the debris surface (or remains mixed with the debris) after treatment is considered a treatment residual that must be separated from the debris using, at a minimum, simple physical or mechanical means. Examples of simple physical or mechanical means are vibratory or trommel screening or water washing. The debris surface need not be cleaned to a "clean debris surface" as defined in note 3 when separating treated debris from residue; rather, the surface must be free of caked soil, waste, or other nondebris material. Treatment residuals are subject to the waste-specific treatment standards for the waste contaminating the debris.

(g) Alternative Treatment Standards Based on HTMR [40 CFR 268.46]

For the treatment standards previously found in this subparagraph, refer to subparagraph (a) of this paragraph.

(h) (RESERVED) [40 CFR 268.47]

(i) Universal Treatment Standards [40 CFR 268.48]

1. Table UTS identifies the hazardous constituents, along with the nonwastewater and wastewater treatment standard levels that are used to regulate most prohibited hazardous wastes with numerical limits. For determining compliance with treatment standards for underlying hazardous constituents as defined in part (1)(b)10 of this rule, these treatment standards may not be exceeded. Compliance with these treatment standards is measured by an analysis of grab samples, unless otherwise noted in the following Table UTS.

UNIVERSAL TREATMENT STANDARDS (NOTE: NA means not applicable.)			
REGULATED CONSTITUENT Common Name[6]	CAS[1] Number	Wastewater Standard	Nonwastewater Standard
		Concentration [2] in mg/l	Concentration[3] in mg/kg unless noted as "mg/l TCLP"
Organic Constituents			
Acenaphthylene	208-96-8	0.059	3.4
Acenaphthene	83-32-9	0.059	3.4
Acetone	67-64-1	0.28	160
Acetonitrile	75-05-8	5.6	38
Acetophenone	96-86-2	0.010	9.7
2-Acetylaminofluorene	53-96-3	0.059	140
Acrolein	107-02-8	0.29	NA
Acrylamide	79-06-1	19	23
Acrylonitrile	107-13-1	0.24	84
Aldicarb sulfone[6]	1646-88-4	0.056	0.28
Aldrin	309-00-2	0.021	0.066
4-Aminobiphenyl	92-67-1	0.13	NA
Aniline	62-53-3	0.81	14
o-Anisidine (2-methoxyaniline)	90-04-0	0.010	0.66
Anthracene	120-12-7	0.059	3.4
Aramite	140-57-8	0.36	NA
alpha-BHC	319-84-6	0.00014	0.066
beta-BHC	319-85-7	0.00014	0.066
delta-BHC	319-86-8	0.023	0.066
gamma-BHC	58-89-9	0.0017	0.066
Barban[6]	101-27-9	0.056	1.4
Bendiocarb[6]	22781-23-3	0.056	1.4
Benomyl[6]	17804-35-2	0.056	1.4
Benzene	71-43-2	0.14	10

Benz(a)anthracene	56-55-3	0.059	3.4
Benzal chloride	98-87-3	0.055	6.0
Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)	205-99-2	0.11	6.8
Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)	207-08-9	0.11	6.8
Benzo(g,h,i)perylene	191-24-2	0.0055	1.8
Benzo(a)pyrene	50-32-8	0.061	3.4
Bromodichloromethane	75-27-4	0.35	15
Bromomethane/Methyl bromide	74-83-9	0.11	15
4-Bromophenyl phenyl ether	101-55-3	0.055	15
n-Butyl alcohol	71-36-3	5.6	2.6
Butylate[6]	2008-41-5	0.042	1.4
Butyl benzyl phthalate	85-68-7	0.017	28
2-sec-Butyl-4,6-dinitrophenol/Dinoseb	88-85-7	0.066	2.5
Carbaryl[6]	63-25-2	0.006	0.14
Carbenzadim[6]	10605-21-7	0.056	1.4
Carbofuran[6]	1563-66-2	0.006	0.14
Carbofuran phenol[6]	1563-38-8	0.056	1.4
Carbon disulfide	75-15-0	3.8	4.8 mg/l TCLP
Carbon tetrachloride	56-23-5	0.057	6.0
Carbosulfan[6]	55285-14-8	0.028	1.4
Chlordane (alpha and gamma isomers)	57-74-9	0.0033	0.26
p-Chloroaniline	106-47-8	0.46	16
Chlorobenzene	108-90-7	0.057	6.0
Chlorobenzilate	510-15-6	0.10	NA
2-Chloro-1,3-butadiene	126-99-8	0.057	0.28
Chlorodibromomethane	124-48-1	0.057	15
Chloroethane	75-00-3	0.27	6.0
bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2
bis(2-Chloroethyl)ether	111-44-4	0.033	6.0

Chloroform	67-66-3	0.046	6.0
bis(2-Chloroisopropyl)ether	39638-32-9	0.055	7.2
p-Chloro-m-cresol	59-50-7	0.018	14
2-Chloroethyl vinyl ether	110-75-8	0.062	NA
Chloromethane/Methyl chloride	74-87-3	0.19	30
2-Chloronaphthalene	91-58-7	0.055	5.6
2-Chlorophenol	95-57-8	0.044	5.7
3-Chloropropylene	107-05-1	0.036	30
Chrysene	218-01-9	0.059	3.4
p-Cresidine	120-71-8	0.010	0.66
o-Cresol	95-48-7	0.11	5.6
m-Cresol (difficult to distinguish from p-cresol)	108-39-4	0.77	5.6
p-Cresol (difficult to distinguish from m-cresol)	106-44-5	0.77	5.6
m-Cumenyl methylcarbamate[6]	64-00-6	0.056	1.4
Cyclohexanone	108-94-1	0.36	0.75 mg/l TCLP
o,p'-DDD	53-19-0	0.023	0.087
p,p'-DDD	72-54-8	0.023	0.087
o,p'-DDE	3424-82-6	0.031	0.087
p,p'-DDE	72-55-9	0.031	0.087
o,p'-DDT	789-02-6	0.0039	0.087
p,p'-DDT	50-29-3	0.0039	0.087
Dibenz(a,h)anthracene	53-70-3	0.055	8.2
Dibenz(a,e)pyrene	192-65-4	0.061	NA
1,2-Dibromo-3-chloropropane	96-12-8	0.11	15
1,2-Dibromoethane/Ethylene dibromide	106-93-4	0.028	15
Dibromomethane	74-95-3	0.11	15
m-Dichlorobenzene	541-73-1	0.036	6.0
o-Dichlorobenzene	95-50-1	0.088	6.0
p-Dichlorobenzene	106-46-7	0.090	6.0
Dichlorodifluoromethane	75-71-8	0.23	7.2
1,1-Dichloroethane	75-34-3	0.059	6.0

1,2-Dichloroethane	107-06-2	0.21	6.0
1,1-Dichloroethylene	75-35-4	0.025	6.0
trans-1,2-Dichloroethylene	156-60-5	0.054	30
2,4-Dichlorophenol	120-83-2	0.044	14
2,6-Dichlorophenol	87-65-0	0.044	14
2,4-Dichlorophenoxyacetic acid/2,4-D	94-75-7	0.72	10
1,2-Dichloropropane	78-87-5	0.85	18
cis-1,3-Dichloropropylene	10061-01-5	0.036	18
trans-1,3-Dichloropropylene	10061-02-6	0.036	18
Dieldrin	60-57-1	0.017	0.13
Diethyl phthalate	84-66-2	0.20	28
p-Dimethylaminoazobenzene	60-11-7	0.13	NA
2, 4-Dimethylaniline (2, 4-xylidine)	95-68-1	0.010	0.66
2-4-Dimethyl phenol	105-67-9	0.036	14
Dimethyl phthalate	131-11-3	0.047	28
Di-n-butyl phthalate	84-74-2	0.057	28
1,4-Dinitrobenzene	100-25-4	0.32	2.3
4,6-Dinitro-o-cresol	534-52-1	0.28	160
2,4-Dinitrophenol	51-28-5	0.12	160
2,4-Dinitrotoluene	121-14-2	0.32	140
2,6-Dinitrotoluene	606-20-2	0.55	28
Di-n-octyl phthalate	117-84-0	0.017	28
Di-n-propylnitrosamine	621-64-7	0.40	14
1,4-Dioxane	123-91-1	12.0	170
Diphenylamine (difficult to distinguish from diphenylnitrosamine)	122-39-4	0.92	13
Diphenylnitrosamine (difficult to distinguish from diphenylamine)	86-30-6	0.92	13
1,2-Diphenylhydrazine	122-66-7	0.087	NA
Disulfoton	298-04-4	0.017	6.2
Dithiocarbamates (total) [6]	NA	0.028	28
Endosulfan I	959-98-8	0.023	0.066
Endosulfan II	33213-65-9	0.029	0.13

Endosulfan sulfate	1031-07-8	0.029	0.13
Endrin	72-20-8	0.0028	0.13
Endrin aldehyde	7421-93-4	0.025	0.13
EPTC[5]	759-94-4	0.042	1.4
Ethyl acetate	141-78-6	0.34	33
Ethyl benzene	100-41-4	0.057	10
Ethyl cyanide/Propanenitrile	107-12-0	0.24	360
Ethyl ether	60-29-7	0.12	160
bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
Ethyl methacrylate	97-63-2	0.14	160
Ethylene oxide	75-21-8	0.12	NA
Famphur	52-85-7	0.017	15
Fluoranthene	206-44-0	0.068	3.4
Fluorene	86-73-7	0.059	3.4
Formetanate hydrochloride[5]	23422-53-9	0.056	1.4
Heptachlor	76-44-8	0.0012	0.066
Heptachlor epoxide	1024-57-3	0.016	0.066
1, 2, 3, 4, 6, 7, 8-Heptachlorodibenzo-p-dioxin (1, 2, 3, 4, 6, 7, 8-HpCDD)	35822-46-9	0.000035	0.0025
1, 2, 3, 4, 6, 7, 8-Heptachlorodibenzofuran (1, 2, 3, 4, 6, 7, 8-HpCDF)	67562-39-4	0.000035	0.0025
1, 2, 3, 4, 7, 8, 9-Heptachlorodibenzofuran (1, 2, 3, 4, 7, 8, 9-HpCDF)	55673-89-7	0.000035	0.0025
Hexachlorobenzene	118-74-1	0.055	10
Hexachlorobutadiene	87-68-3	0.055	5.6
Hexachlorocyclopentadiene	77-47-4	0.057	2.4
HxCDDs (All Hexachlorodibenzo-p-dioxins)	NA	0.000063	0.001
HxCDFs (All Hexachlorodibenzofurans)	NA	0.000063	0.001
Hexachloroethane	67-72-1	0.055	30
Hexachloropropylene	1888-71-7	0.035	30
Indeno (1,2,3-c,d) pyrene	193-39-5	0.0055	3.4
Iodomethane	74-88-4	0.19	65
Isobutyl alcohol	78-83-1	5.6	170

Isodrin	465-73-6	0.021	0.066
Isosafrole	120-58-1	0.081	2.6
Kepone	143-50-0	0.0011	0.13
Methacrylonitrile	126-98-7	0.24	84
Methanol	67-56-1	5.6	0.75 mg/l TCLP
Methapyrilene	91-80-5	0.081	1.5
Methiocarb[6]	2032-65-7	0.056	1.4
Methomyl[6]	16752-77-5	0.028	0.14
Methoxychlor	72-43-5	0.25	0.18
3-Methylcholanthrene	56-49-5	0.0055	15
4,4-Methylene bis(2-chloroaniline)	101-14-4	0.50	30
Methylene chloride	75-09-2	0.089	30
Methyl ethyl ketone	78-93-3	0.28	36
Methyl isobutyl ketone	108-10-1	0.14	33
Methyl methacrylate	80-62-6	0.14	160
Methyl methansulfonate	66-27-3	0.018	NA
Methyl parathion	298-00-0	0.014	4.6
Metolcarb[6]	1129-41-5	0.056	1.4
Mexacarbate[6]	315-18-4	0.056	1.4
Molinate[6]	2212-67-1	0.042	1.4
Naphthalene	91-20-3	0.059	5.6
2-Naphthylamine	91-59-8	0.52	NA
o-Nitroaniline	88-74-4	0.27	14
p-Nitroaniline	100-01-6	0.028	28
Nitrobenzene	98-95-3	0.068	14
5-Nitro-o-toluidine	99-55-8	0.32	28
o-Nitrophenol	88-75-5	0.028	13
p-Nitrophenol	100-02-7	0.12	29
N-Nitrosodiethylamine	55-18-5	0.40	28
N-Nitrosodimethylamine	62-75-9	0.40	2.3
N-Nitroso-di-n-butylamine	924-16-3	0.40	17
N-Nitrosomethylethylamine	10595-95-6	0.40	2.3
N-Nitrosomorpholine	59-89-2	0.40	2.3

N-Nitrosopiperidine	100-75-4	0.013	35
N-Nitrosopyrrolidine	930-55-2	0.013	35
1, 2, 3, 4, 6, 7, 8, 9-Octachlorodibenzo-p-dioxin (OCDD)	3268-87-9	0.000063	0.005
1, 2, 3, 4, 6, 7, 8, 9-Octachlorodibenzofuran (OCDF)	39001-02-0	0.000063	0.005
Oxamyl[6]	23135-22-0	0.056	0.28
Parathion	56-38-2	0.014	4.6
Total PCBs (sum of all PCB isomers, or all Aroclors)[8]	1336-36-3	0.10	10
Pebulate [6]	1114-71-2	0.042	1.4
Pentachlorobenzene	608-93-5	0.055	10
PeCDDs (All Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
PeCDFs (All Pentachlorodibenzofurans)	NA	0.000035	0.001
Pentachloroethane	76-01-7	0.055	6.0
Pentachloronitrobenzene	82-68-8	0.055	4.8
Pentachlorophenol	87-86-5	0.089	7.4
Phenacetin	62-44-2	0.081	16
Phenanthrene	85-01-8	0.059	5.6
Phenol	108-95-2	0.039	6.2
1, 3-Phenylenediamine	108-45-2	0.010	0.66
Phorate	298-02-2	0.021	4.6
Phthalic acid	100-21-0	0.055	28
Phthalic anhydride	85-44-9	0.055	28
Physostigmine[6]	57-47-6	0.056	1.4
Physostigmine salicylate[6]	57-64-7	0.056	1.4
Promecarb[6]	2631-37-0	0.056	1.4
Pronamide	23950-58-5	0.093	1.5
Propham[6]	122-42-9	0.056	1.4
Propoxur[6]	114-26-1	0.056	1.4
Prosulfocarb[6]	52888-80-9	0.042	1.4
Pyrene	129-00-0	0.067	8.2
Pyridine	110-86-1	0.014	16

Safrole	94-59-7	0.081	22
Silvex/2,4,5-TP	93-72-1	0.72	7.9
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14
TCDDs (All Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
TCDFs (All Tetrachlorodibenzofurans)	NA	0.000063	0.001
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0
Tetrachloroethylene	127-18-4	0.056	6.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.030	7.4
Thiodicarb[6]	59669-26-0	0.019	1.4
Thiophanate-methyl[6]	23564-05-8	0.056	1.4
Toluene	108-88-3	0.080	10
Toxaphene	8001-35-2	0.0095	2.6
Triallate[6]	2303-17-5	0.042	1.4
Tribromomethane/Bromoform	75-25-2	0.63	15
1,2,4-Trichlorobenzene	120-82-1	0.055	19
1,1,1-Trichloroethane	71-55-6	0.054	6.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0
Trichloroethylene	79-01-6	0.054	6.0
Trichloromonofluoromethane	75-69-4	0.020	30
2,4,5-Trichlorophenol	95-95-4	0.18	7.4
2,4,6-Trichlorophenol	88-06-2	0.035	7.4
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T	93-76-5	0.72	7.9
1,2,3-Trichloropropane	96-18-4	0.85	30
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.057	30
Triethylamine[6]	101-44-8	0.081	1.5
tris-(2,3-Dibromopropyl) phosphate	126-72-7	0.11	0.10
Vernolate[6]	1929-77-7	0.042	1.4
Vinyl chloride	75-01-4	0.27	6.0
Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30

Inorganic Constituents			
Antimony	7440-36-0	1.9	1.15 mg/l TCLP
Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
Barium	7440-39-3	1.2	21 mg/l TCLP
Beryllium	7440-41-7	0.82	1.22 mg/l TCLP
Cadmium	7440-43-9	0.69	0.11 mg/l TCLP
Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
Cyanides (Total)[4]	57-12-5	1.2	590
Cyanides (Amenable)[4]	57-12-5	0.86	30
Fluoride[5]	16984-48-8	35	NA
Lead	7439-92-1	0.69	0.75 mg/l TCLP
Mercury - Nonwastewater from Retort	7439-97-6	NA	0.20 mg/l TCLP
Mercury - All Others	7439-97-6	0.15	0.025 mg/lTCLP
Nickel	7440-02-0	3.98	11 mg/l TCLP
Selenium[7]	7782-49-2	0.82	5.7 mg/l TCLP
Silver	7440-22-4	0.43	0.14 mg/l TCLP
Sulfide[5]	18496-25-8	14	NA
Thallium	7440-28-0	1.4	0.20 mg/l TCLP
Vanadium[5]	7440-62-2	4.3	1.6 mg/l TCLP
Zinc[5]	7440-66-6	2.61	4.3 mg/l TCLP

Footnotes to Universal Treatment Standards Table:

1 CAS means Chemical Abstract Services. When the waste code and/or regulated constituents are described as a combination of a chemical with its salts and/or esters, the CAS number is given for the parent compound only.

2 Concentration standards for wastewaters are expressed in mg/L and are based on analysis of composite samples.

3 Except for Metals (EP or TCLP) and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of Rule 0400-12-01-.06(15) or 0400-12-01-

.05(15), or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in part (a)4 of this paragraph. All concentration standards for nonwastewaters are based on analysis of grab samples.

4 Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using Method 9010C or 9012B, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, listed in 40 CFR 260.11, Rule 0400-12-01-.02(2)(b)1, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.

5 These constituents are not "underlying hazardous constituents" in characteristic wastes, according to the definition at part (1)(b)10 of this rule.

6 Between August 26, 1998 and March 4, 1999, these constituents are not "underlying hazardous constituents" as defined in part (1)(b)10 of this rule.

7 This constituent is not an underlying hazardous constituent as defined at Rule 0400-12-01-.10(1)(b)10 because its UTS level is greater than its TC level, thus a treated selenium waste would always be characteristically hazardous unless it is treated to below its characteristic level.

8 This standard is temporarily deferred for soil exhibiting a hazardous characteristic due to D004--D011 only.

(j) Alternative LDR Treatment Standards for Contaminated Soil [40 CFR 268.49]

1. Applicability.

You must comply with LDRs prior to placing soil that exhibits a characteristic of hazardous waste, or exhibited a characteristic of hazardous waste at the time it was generated, into a land disposal unit. The following chart describes whether you must comply with LDRs prior to placing soil contaminated by listed hazardous waste into a land disposal unit:

If LDRs...	And If LDRs...	And If ...	Then You...
applied to the listed waste when it contaminated the soil*	apply to the listed waste now	----------	must comply with LDRs
didn't apply to the listed waste when it contaminated the soil*	apply to the listed waste now	the soil is determined to contain the listed waste when the soil is first generated	must comply with LDRs
didn't apply to the listed waste when it contaminated the soil*	apply to the listed waste now	the soil is determined not to contain the listed waste when the soil is first generated	needn't comply with LDRs
didn't apply to the listed waste when it contaminated the soil*	don't apply to the listed waste now	----------	needn't comply with LDRs

* For dates of LDR applicability, see Rule 0400-12-01-.10 Appendix VII. To determine the date any given listed hazardous waste contaminated any given volume of soil, use the last date any given listed hazardous waste was placed into any given land disposal unit or, in the case of an accidental spill, the date of the spill.

2. Prior to land disposal, contaminated soil identified by part 1 of this subparagraph as needing to comply with LDRs must be treated according to the applicable treatment standards specified in part 3 of this subparagraph or according to the Universal Treatment Standards specified in subparagraph (i) of this paragraph applicable to the contaminating listed hazardous waste and/or the applicable characteristic of hazardous waste if the soil is characteristic. The treatment standards specified in part 3 of this subparagraph and the Universal Treatment Standards may be modified through a treatment variance approved in accordance with subparagraph (e) of this paragraph.

3. Treatment standards for contaminated soils. Prior to land disposal, contaminated soil identified by part 1 of this subparagraph as needing to comply with LDRs must be treated

according to all the standards specified in this part or according to the Universal Treatment Standards specified in subparagraph (i) of this paragraph.

(i) All soils. Prior to land disposal, all constituents subject to treatment must be treated as follows:

(I) For non-metals except carbon disulfide, cyclohexanone, and methanol, treatment must achieve 90 percent reduction in total constituent concentrations, except as provided by item (III) of this subpart.

(II) For metals and carbon disulfide, cyclohexanone, and methanol, treatment must achieve 90 percent reduction in constituent concentrations as measured in leachate from the treated media (tested according to the TCLP) or 90 percent reduction in total constituent concentrations (when a metal removal treatment technology is used), except as provided by item (III) of this subpart.

(III) When treatment of any constituent subject to treatment to a 90 percent reduction standard would result in a concentration less than 10 times the Universal Treatment Standard for that constituent, treatment to achieve constituent concentrations less than 10 times the universal treatment standard is not required. Universal Treatment Standards are identified in subparagraph (i) of this paragraph, Table UTS.

(ii) Soils that exhibit the characteristic of ignitability, corrosivity or reactivity. In addition to the treatment required by subpart (i) of this part, prior to land disposal, soils that exhibit the characteristic of ignitability, corrosivity, or reactivity must be treated to eliminate these characteristics.

(iii) Soils that contain nonanalyzable constituents. In addition to the treatment requirements of subparts (i) and (ii) of this part, prior to land disposal, the following treatment is required for soils that contain nonanalyzable constituents:

(I) For soil that also contains only analyzable and nonanalyzable organic constituents, treatment of the analyzable organic constituents to the levels specified in subparts (i) and (ii) of this part; or,

(II) For soil that contains only nonanalyzable constituents, treatment by the method(s) specified in subparagraph (c) of this paragraph for the waste contained in the soil.

4. Constituents subject to treatment. When applying the soil treatment standards in part 3 of this subparagraph, constituents subject to treatment are any constituents listed in subparagraph (i) of this paragraph, Table UTS--Universal Treatment Standards that are reasonably expected to be present in any given volume of contaminated soil, except fluoride, selenium, sulfides, vanadium and zinc, and that are present at concentrations greater than ten times the universal treatment standard. PCBs are not constituent subject to treatment in any given volume of soil which exhibits the toxicity characteristic solely because of the presence of metals.

5. Management of treatment residuals. Treatment residuals from treating contaminated soil identified by part 1 of this subparagraph as needing to comply with LDRs must be managed as follows:

(i) Soil residuals are subject to the treatment standards of this subparagraph;

(ii) Non-soil residuals are subject to:

(I) For soils contaminated by listed hazardous waste, the RCRA Subtitle C standards applicable to the listed hazardous waste; and

(II) For soils that exhibit a characteristic of hazardous waste, if the non-soil residual also exhibits a characteristic of hazardous waste, the treatment standards applicable to the characteristic hazardous waste.

(4) Prohibitions on Storage [40 CFR 268 Subpart E]

(a) Prohibitions on Storage of Restricted Wastes [40 CFR 268.50]

1. Except as provided in this subparagraph, the storage of hazardous wastes restricted from land disposal under paragraph (2) of this rule or federal RCRA section 3004 is prohibited, unless the following conditions are met:

(i) A generator stores such wastes in tanks, containers, or containment buildings on-site solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment, or disposal and the generator complies with the requirements in Rule 0400-12-01-.03(4)(e) and Rules 0400-12-01-.06 and .05.

(ii) An owner/operator of a hazardous waste treatment, storage, or disposal facility stores such wastes in tanks, containers, or containment buildings solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment, or disposal and:

(I) Each container is clearly marked to identify its contents and the date each period of accumulation begins;

(II) Each tank is clearly marked with a description of its contents, the quantity of each hazardous waste received, and the date each period of accumulation begins, or such information for each tank is recorded and maintained in the operating record at that facility. Regardless of whether the tank itself is marked, an owner/operator must comply with the operating record requirements specified in Rule 0400-12-01-.06(5)(d) or Rule 0400-12-01-.05(5)(d).

(iii) A transporter stores manifested shipments of such wastes at a transfer facility for 10 days or less.

2. An owner/operator of a treatment, storage or disposal facility may store such wastes for up to one year unless the Department can demonstrate that such storage was not solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal.

3. An owner/operator of a treatment, storage or disposal facility may store such wastes beyond one year; however, the owner/operator bears the burden of proving that such storage was solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal.

4. If a generator's waste is exempt from a prohibition on the type of land disposal utilized for the waste (for example, because of an approved case-by-case extension under subparagraph (1)(e) of this rule, an approved petition under subparagraph (1)(f) of this rule, or a national capacity variance under paragraph (2) of this rule), the prohibition in part 1 of this subparagraph does not apply during the period of such exemption.

5. The prohibition in part 1 of this subparagraph does not apply to hazardous wastes that meet the treatment standards specified under subparagraphs (3)(b), (c), and (d) of this rule or the treatment standards specified under the variance in subparagraph (3)(e) of this rule, or, where treatment standards have not been specified, is in compliance with the applicable prohibitions specified in subparagraph (2)(c) of this rule or federal RCRA section 3004.

6. Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 ppm must be stored at a facility that meets the requirements of 40 CFR 761.65(b) and must be removed from storage and treated or disposed as required by this rule within one year of the date when such wastes are first placed into storage. The provisions of part 3 of this subparagraph do not apply to such PCB wastes prohibited under subparagraph (2)(c) of this rule.

7. The prohibition and requirements in this paragraph do not apply to hazardous remediation wastes stored in a staging pile approved pursuant to Rule 0400-12-01-.06(22)(e).

(5) APPENDICES [40 CFR 268 APPENDICES]

Appendix I - (RESERVED) [40 CFR 268 Appendix I]

Appendix II - (RESERVED) [40 CFR 268 Appendix II]

Appendix III – List of Halogenated Organic Compounds Regulated Under Subparagraph (2)(c) of this rule [40 CFR 268 Appendix III]

In determining the concentration of HOCs in a hazardous waste for purposes of the land disposal prohibition of subparagraph (2)(c) of this rule, Tennessee has defined the HOCs that must be included in a calculation as any compounds having a carbon-halogen bond which are listed in this Appendix (see subparagraph (1)(b) of this rule).

Appendix III to Rule 0400-12-01-.10 consists of the following compounds:

I. Volatiles

1. Bromodichloromethane
2. Bromomethane
3. Carbon Tetrachloride
4. Chlorobenzene
5. 2-Chloro-1.3-butadiene
6. Chlorodibromomethane
7. Chloroethane
8. 2-Chloroethyl vinyl ether
9. Chloroform
10. Chloromethane
11. 3-Chloropropene
12. 1.2-Dibromo-3-chloropropane
13. 1.2-Dibromomethane
14. Dibromomethane
15. Trans-1.4-Dichloro-2-butene
16. Dichlorodifluoromethane
17. 1.1-Dichloroethane
18. 1.2-Dichloroethane
19. 1.1-Dichloroethylene
20. Trans-1.2-Dichloroethene
21. 1.2-Dichloropropane
22. Trans-1,3-Dichloropropene
23. cis-1,3-Dichloropropene
24. Iodomethane
25. Methylene chloride
26. 1, 1, 1, 2-Tetrachloroethane
27. 1, 1, 2, 2-Tetrachloroethane
28. Tetrachloroethene
29. Tribromomethane
30. 1, 1, 1-Trichloroethane
31. 1, 1, 2-Trichloroethane
32. Trichlorothene

33. Trichloromonofluoromethane
34. 1, 2, 3-Thrichloropropane
35. Vinyl Chloride

II. Semivolatiles

1. Bis(2chloroethoxy) ethane
2. Bis(2-chloroethyl) ether
3. Bis(2-chloroisopropyl) ether
4. p-Chloroaniline
5. Chlorobenzilate
6. p-Chloro-m-cresol
7. 2-Chloroanphthalene
8. 2-Chlorphenol
9. 3-Chloropropionitrile
10. m-Dichlorobenzene
11. o-Dichlorobenzene
12. p-Dichlorobenzene
13. 3.3'-Dichlorobenzidine
14. 2.4-Dichlorophenol
15. 2.6-Dichlorophenol
16. Hexachlorobenzene
17. Hexachlorobutadiene
18. Hexachlorocyclopentadiene
19. Hexachloroethane
20. Hexachloroprophene
21. Hexachlorpropene
22. 4.4'-Methylenebis (2-chloroanaline)
23. Pentachlorobenzene
24. Pentachloroethane
25. Pentachloronitrobenzene
26. Pentachlorophenol
27. Pronamide
28. 1, 2, 4, 5-Tetrachlorobenzene
29. 2, 3, 4, 6-Tetrachlorophenol
30. 1, 2, 4-Trichlorobenzene
31. 2, 4, 5-Trichlorophenol
32. 2, 4, 6-Trichlorophenol
33. Tris(2, 3-dibromopropyl) phosphate

III. Organochlorine Pesticides

1. Aldrin
2. alpha-BHC
3. beta-BHC
4. delta-BHC
5. gamma-BHC
6. Chlorodane
7. DDD
8. DDE
9. DDT
10. Dieldrin
11. Endosulfan I
12. Endosulfan II
13. Endrin
14. Endrin aldehyde
15. Heptachlor
16. Heptachlor epoxide
17. Isodrin
18. Kepone
19. Methoxyclor

20. Toxaphene

IV. Phenoxyacetic Acid Herbicides

1. 2,4-Dichlorophenoxyacetic acid
2. Silvex
3. 2, 4, 5,-T

V. PCBs

1. Aroclor 1016
2. Aroclor 1221
3. Aroclor 1232
4. Aroclor 1242
5. Aroclor 1248
6. Aroclor 1254
7. Aroclor 1260
8. PCBs not otherwise specified

VI. Dioxins and Furans

1. Hexachlorodibenzo-p-dioxins
2. Hexachlorodibenzofuran
3. Pentachlorodibenzo-p-dioxins
4. Pentachlorodibenzofuran
5. Tetrachlorodibenzo-p-dioxins
6. Tetrachlorodibenzofuran
7. 2, 3, 7, 8-Tetrachlorodibenzo-p-dioxin

Appendix IV-Wastes Excluded From Lab Packs Under the Alternative Treatment Standards of Part (3)(c)3 of this Rule [40 CFR 268 Appendix IV]

Hazardous waste with the following Hazardous Waste Codes may not be placed in lab packs under the alternative lab pack treatment standards of part (3)(c)3 of this rule: D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, U151.

Appendix V -- (RESERVED) [40 CFR 268 Appendix V]

Appendix VI -- Recommended Technologies to Achieve Deactivation of Characteristics in Subparagraph (3)(c) of this Rule [40 CFR 268 Appendix VI]

The treatment standard for many characteristic wastes is stated in subparagraph (3)(a) of this rule, Table of Treatment Standards as "Deactivation and meet UTS." EPA has determined that many technologies, when used alone or in combination, can achieve the deactivation portion of the treatment standard. Characteristic wastes that are not managed in a facility regulated by the Clean Water Act (CWA) or in a CWA-equivalent facility, and that also contain underlying hazardous constituents (see part (1)(b)10 of this rule) must be treated not only by the "deactivating" technology to remove the characteristic, but also to achieve the universal treatment standards (UTS) for underlying hazardous constituents. The following appendix presents a partial list of technologies, utilizing the five letter technology codes established in subparagraph (3)(c) of this rule, Table 1, that may be useful in meeting the treatment standard. Use of these specific technologies is not mandatory and does not preclude direct reuse, recovery, and/or the use of other pretreatment technologies, provided deactivation is achieved and underlying hazardous constituents are treated to achieve the UTS.

Waste Code/Subcategory	Nonwastewaters	Wastewaters

D001 Ignitable Liquids based on 0400-12-01-.02(3)(b)1(i)-- Low TOC Nonwastewater Subcategory (containing 1% to <10% TOC)	RORGS INCIN WETOX CHOXD BIODG	n.a[a]
D001 Ignitable Liquids based on 0400-12-01-.02(3)(b)1(i) -- Ignitable Wastewater Subcategory (containing <1% TOC)	n.a.	RORGS INCIN WETOX CHOXD BIODG
D001 Compressed Gases based on 0400-12-01-.02(3)(b)1(iii)	RCGAS INCIN FSUBS ADGAS fb. INCIN ADGAS fb. (CHOXD; or CHRED)	n.a.
D001 Ignitable Reactives based on 0400-12-01-.02(3)(b)1(ii)	WTRRX CHOXD CHRED STABL INCIN	n.a.
D001 Ignitable Oxidizers based on 0400-12-01-.02(3)(b)1(iv)	CHRED INCIN	CHRED INCIN
D002 Acid Subcategory based on 0400-12-01-.02(3)(c)1(i) with pH less than or equal to 2	RCORR NEUTR INCIN	NEUTR INCIN
D002 Alkaline Subcategory based on 0400-12-01-.02(3)(c)1(i) with pH greater than or equal to 12.5	NEUTR INCIN	NEUTR INCIN
D002 Other Corrosives based on 0400-12-01-.02(3)(c)1(ii)	CHOXD CHRED INCIN STABL	CHOXD CHRED INCIN
D003 Water Reactives based on 0400-12-01-.02(3)(d)1(ii),(iii), and (iv)	INCIN WTRRX CHOXD CHRED	n.a.
D003 Reactive Sulfides based on 0400-12-01-.02(3)(d)1(v)	CHOXD CHRED INCIN STABL	CHOXD CHRED BIODG INCIN
D003 Explosives based on 0400-12-01-.02(3)(d)1(vi),(vii), and (viii)	INCIN CHOXD CHRED	INCIN CHOXD CHRED BIODG CARBN
D003 Other Reactives based on 0400-12-01-.02(3)(d)1(i)	INCIN CHOXD CHRED	INCIN CHOXD CHRED BIODG CARBN

K044 Wastewater treatment sludges from the manufacturing and processing of explosives	CHOXD CHRED INCIN	CHOXD CHRED BIODG CARBN INCIN
K045 Spent carbon from the treatment of wastewaters containing explosives	CHOXD CHRED INCIN	CHOXD CHRED BIODG CARBN INCIN
K047 Pink/red water from TNT operations	CHOXD CHRED INCIN	CHOXD CHRED BIODG CARBN INCIN

FOOTNOTE:[a] Note: "n.a." stands for "not applicable"; "fb." stands for "followed by".

Appendix VII - Effective Dates of Surface Disposed Wastes Regulated in the LDRs [40 CFR 268 Appendix VII]

TABLE 1.-EFFECTIVE DATES OF SURFACE DISPOSED WASTES [(NON-SOIL AND DEBRIS) REGULATED IN THE LDRs[a] - COMPREHENSIVE LIST]

Waste Code	Waste Category	Effective Date
D001[c]	All (except High TOC Ignitable Liquids)	Aug. 9, 1993
D001	High TOC Ignitable Liquids	Aug. 8, 1990
D002[c]	All	Aug. 9, 1993
D003	Newly identified surface-disposed elemental phosphorus processing wastes	May 26, 2000
D004	Newly identified D004 and mineral processing wastes	Aug. 24, 1998
D004	Mixed radioactive/newly identified D004 or mineral processing wastes	May 26, 2000
D005	Newly identified D005 and mineral processing wastes	Aug. 24, 1998
D005	Mixed radioactive/newly identified D005 or mineral processing wastes	May 26, 2000
D006	Newly identified D006 and mineral processing wastes	Aug. 24, 1998
D006	Mixed radioactive/newly identified D006 or mineral processing wastes	May 26, 2000
D007	Newly identified D007 and mineral processing wastes	Aug. 24, 1998
D007	Mixed radioactive/newly identified D007 or mineral processing wastes	May 26, 2000
D008	Newly identified D008 and mineral processing wastes	Aug. 24, 1998
D008	Mixed radioactive/newly identified D008 or mineral processing wastes	May 26, 2000
D009	Newly identified D009 and mineral processing	Aug. 24, 1998

	wastes	
D009	Mixed radioactive/newly identified D009 or mineral processing wastes	May 26, 2000
D010	Newly identified D010 and mineral processing wastes	Aug. 24, 1998
D010	Mixed radioactive/newly identified D010 or mineral processing wastes	May 26, 2000
D011	Newly identified D011 and mineral processing wastes	Aug. 24, 1998
D011	Mixed radioactive/newly identified D011 or mineral processing wastes	May 26, 2000
D012 (that exhibit the toxicity characteristic based on the TCLP)[d]	All	Dec. 14, 1994
D013 (that exhibit the toxicity characteristic based on the TCLP)[d]	All	Dec. 14, 1994
D014 (that exhibit the toxicity characteristic based on the TCLP)[d]	All	Dec. 14, 1994
D015 (that exhibit the toxicity characteristic based on the TCLP)[d]	All	Dec. 14, 1994
D016 (that exhibit the the toxicity characteristic based on the TCLP)[d]	All	Dec. 14, 1994
D017 (that exhibit the toxicity characteristic based on the TCLP)[d]	All	Dec. 14, 1994
D018	Mixed with radioactive wastes	Sept. 19, 1996
D018	All others	Dec. 19, 1994
D019	Mixed with radioactive wastes	Sept. 19, 1996
D019	All others	Dec. 19, 1994
D020	Mixed with radioactive wastes	Sept. 19, 1996
D020	All others	Dec. 19, 1994
D021	Mixed with radioactive wastes	Sept. 19, 1996

D021	All others	Dec. 19, 1994
D022	Mixed with radioactive wastes	Sept. 19, 1996
D022	All others	Dec. 19, 1994
D023	Mixed with radioactive wastes	Sept. 19, 1996
D023	All others	Dec. 19, 1994
D024	Mixed with radioactive wastes	Sept. 19, 1996
D024	All others	Dec. 19, 1994
D025	Mixed with radioactive wastes	Sept. 19, 1996
D025	All others	Dec. 19, 1994
D026	Mixed with radioactive wastes	Sept. 19, 1996
D026	All others	Dec. 19, 1994
D027	Mixed with radioactive wastes	Sept. 19, 1996
D027	All others	Dec. 19, 1994
D028	Mixed with radioactive wastes	Sept. 19, 1996
D028	All others	Dec. 19, 1994
D029	Mixed with radioactive wastes	Sept. 19, 1996
D029	All others	Dec. 19, 1994
D030	Mixed with radioactive wastes	Sept. 19. 1996
D030	All others	Dec. 19, 1994
D031	Mixed with radioactive wastes	Sept. 19, 1996
D031	All others	Dec. 19, 1994
D032	Mixed with radioactive wastes	Sept. 19, 1996
D032	All others	Dec. 19, 1994
D033	Mixed with radioactive wastes	Sept. 19, 1996
D033	All others	Dec. 19, 1994
D034	Mixed with radioactive wastes	Sept. 19, 1996
D034	All others	Dec. 19, 1994
D035	Mixed with radioactive wastes	Sept. 19, 1996
D035	All others	Dec. 19, 1994
D036	Mixed with radioactive wastes	Sept. 19, 1996
D036	All others	Dec. 19, 1994
D037	Mixed with radioactive wastes	Sept. 19, 1996
D037	All others	Dec. 19, 1994
D038	Mixed with radioactive wastes	Sept. 19, 1996
D038	All others	Dec. 19, 1994
D039	Mixed with radioactive wastes	Sept. 19, 1996
D039	All others	Dec. 19, 1994
D040	Mixed with radioactive wastes	Sept. 19, 1996
D040	All others	Dec. 19, 1994
D041	Mixed with radioactive wastes	Sept. 19, 1996
D041	All others	Dec. 19, 1994
D042	Mixed with radioactive wastes	Sept. 19, 1996
D042	All others	Dec. 19, 1994
D043	Mixed with radioactive wastes	Sept. 19, 1996
D043	All others	Dec. 19, 1994
F001	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	Nov. 8, 1988
F001	All others	Nov. 8, 1986
F002 (1,1,2-trichloro-ethane)	Wastewater and Nonwastewater	Aug. 8, 1990
F002	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	Nov. 8, 1988
F002	All others	Nov. 8, 1986

F003	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	Nov. 8, 1988
F003	All others	Nov. 8, 1986
F004	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	Nov. 8, 1986
F004	All others	Nov. 8, 1986
F005 (benzene, 2-ethoxy ethanol, 2-nitropropane)	Wastewater and Nonwastewater	Aug. 8, 1990
F005	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids	Nov. 8, 1988
F005	All others	Nov. 8, 1986
F006	Wastewater	Aug. 8, 1990
F006	Nonwastewater	Aug. 8, 1988
F006 (cyanides)	Nonwastewater	July 8, 1989
F007	All	July 8, 1989
F008	All	July 8, 1989
F009	All	July 8, 1989
F010	All	June 8, 1989
F011 (cyanides)	Nonwastewater	Dec. 8, 1989
F011	All others	July 8, 1989
F012 (cyanides)	Nonwastewater	Dec. 8, 1989
F012	All others	July 8, 1989
F019	All	Aug. 8, 1990
F020	All	Nov. 8, 1988
F021	All	Nov. 8, 1988
F025	All	Aug. 8, 1990
F026	All	Nov. 8, 1988
F027	All	Nov. 8, 1988
F028	All	Nov. 8, 1988
F032	Mixed with radioactive wastes	Aug. 12, 1999
F032	All others	Aug. 12, 1997
F034	Mixed with radioactive wastes	Aug. 12, 1999
F034	All others	Aug. 12, 1997
F035	Mixed with radioactive wastes	May 12, 1999
F035	All others	Aug. 12, 1997
F037	Not generated from surface impoundment cleanouts or closures	June 30, 1993
F037	Generated from surface impoundment cleanouts or closures	June 30, 1994

F037	Mixed with radioactive wastes	June 30, 1994
F038	Not generated from surface impoundment cleanouts or closures	June 30, 1993
F038	Generated from surface impoundment cleanouts or closures	June 30, 1994
F038	Mixed with radioactive wastes	June 30, 1994
F039	Wastewater	Aug. 8, 1990
F039	Nonwastewater	May 8, 1992
K001 (organics)[b]	All	Aug. 8, 1988
K001	All others	Aug. 8, 1988
K002	All	Aug. 8, 1990
K003	All	Aug. 8, 1990
K004	Wastewater	Aug. 8, 1990
K004	Nonwastewater	Aug. 8, 1988
K005	Wastewater	Aug. 8, 1990
K005	Nonwastewater	June 8, 1989
K006	All	Aug. 8, 1990
K007	Wastewater	Aug. 8, 1990
K007	Nonwastewater	June 8, 1989
K008	Wastewater	Aug. 8, 1990
K008	Nonwastewater	Aug. 8, 1988
K009	All	June 8, 1989
K010	All	June 8, 1989
K011	Wastewater	Aug. 8, 1990
K011	Nonwastewater	June 8, 1989
K013	Wastewater	Aug. 8, 1990
K013	Nonwastewater	June 8, 1989
K014	Wastewater	Aug. 8, 1990
K014	Nonwastewater	June 8, 1989
K015	Wastewater	Aug. 8, 1988
K015	Nonwastewater	Aug. 8, 1990
K016	All	Aug. 8, 1988
K017	All	Aug. 8, 1990
K018	All	Aug. 8, 1988
K019	All	Aug. 8, 1988
K020	All	Aug. 8, 1988
K021	Wastewater	Aug. 8, 1990
K021	Nonwastewater	Aug. 8, 1988
K022	Wastewater	Aug. 8, 1990
K022	Nonwastewater	Aug. 8, 1988
K023	All	June 8, 1989
K024	All	Aug. 8, 1988
K025	Wastewater	Aug. 8, 1990
K025	Nonwastewater	Aug. 8, 1988
K026	All	Aug. 8, 1990
K027	All	June 8, 1989
K028 (metals)	Nonwastewater	Aug. 8, 1990
K028	All others	June 8, 1989
K029	Wastewater	Aug. 8, 1990
K029	Nonwastewater	June 8, 1989
K030	All	Aug. 8, 1988
K031	Wastewater	Aug. 8, 1990
K031	Nonwastewater	May 8, 1992
K032	All	Aug. 8, 1990
K033	All	Aug. 8, 1990

K034	All	Aug. 8, 1990
K035	All	Aug. 8, 1990
K036	Wastewater	June 8, 1989
K036	Nonwastewater	Aug. 8, 1988
K037[b]	Wastewater	Aug. 8, 1988
K037	Nonwastewater	Aug. 8, 1988
K038	All	June 8, 1989
K039	All	June 8, 1989
K040	All	June 8, 1989
K041	All	Aug. 8, 1990
K042	All	Aug. 8, 1990
K043	All	June 8, 1989
K044	All	Aug. 8, 1988
K045	All	Aug. 8, 1988
K046 (Nonreactive)	Nonwastewater	Aug. 8, 1988
K046	All others	Aug. 8, 1990
K047	All	Aug. 8, 1988
K048	Wastewater	Aug. 8, 1990
K048	Nonwastewater	Nov. 8, 1990
K049	Wastewater	Aug. 8, 1990
K049	Nonwastewater	Nov. 8, 1990
K050	Wastewater	Aug. 8, 1990
K050	Nonwastewater	Nov. 8, 1990
K051	Wastewater	Aug. 8, 1990
K051	Nonwastewater	Nov. 8, 1990
K052	Wastewater	Aug. 8, 1990
K052	Nonwastewater	Nov. 8, 1990
K060	Wastewater	Aug. 8, 1990
K060	Nonwastewater	Aug. 8, 1988
K061	Wastewater	Aug. 8, 1990
K061	Nonwastewater	June 30, 1992
K062	All	Aug. 8, 1988
K069 (Non-Calcium Sulfate)	Nonwastewater	Aug. 8, 1988
K069	All others	Aug. 8, 1990
K071	All	Aug. 8, 1990
K073	All	Aug. 8, 1990
K083	All	Aug. 8, 1990
K084	Wastewater	Aug. 8, 1990
K084	Nonwastewater	May 8, 1992
K085	All	Aug. 8, 1990
K086 (organics)[b]	All	Aug. 8, 1988
K086	All others	Aug. 8, 1988
K087	All	Aug. 8, 1988
K088	Mixed with radioactive wastes	Apr. 8, 1998
K088	All others	Oct. 8, 1997
K093	All	June 8, 1989
K094	All	June 8, 1989
K095	Wastewater	Aug. 8, 1990
K095	Nonwastewater	June 8, 1989
K096	Wastewater	Aug. 8, 1990
K096	Nonwastewater	June 8, 1989
K097	All	Aug. 8, 1990
K098	All	Aug. 8, 1990
K099	All	Aug. 8, 1988
K100	Wastewater	Aug. 8, 1990

K100	Nonwastewater	Aug. 8, 1988
K101 (organics)	Wastewater	Aug. 8, 1988
K101 (metals)	Wastewater	Aug. 8, 1990
K101 (organics)	Nonwastewater	Aug. 8, 1988
K101 (metals)	Nonwastewater	May 8, 1992
K102 (organics)	Wastewater	Aug. 8, 1988
K102 (metals)	Wastewater	Aug. 8, 1990
K102 (organics)	Nonwastewater	Aug. 8, 1988
K102 (metals)	Nonwastewater	May 8, 1992
K103	All	Aug. 8, 1988
K104	All	Aug. 8, 1988
K105	All	Aug. 8, 1990
K106	Wastewater	Aug. 8, 1990
K106	Nonwastewater	May 8, 1992
K107	Mixed with radioactive wastes	June 30, 1994
K107	All others	Nov. 9, 1992
K108	Mixed with radioactive wastes	June 30, 1994
K108	All others	Nov. 9, 1992
K109	Mixed with radioactive wastes	June 30, 1994
K109	All others	Nov. 9, 1992
K110	Mixed with radioactive wastes	June 30, 1994
K110	All others	Nov. 9, 1992
K111	Mixed with radioactive wastes	June 30, 1994
K111	All others	Nov. 9, 1992
K112	Mixed with radioactive wastes	June 30, 1994
K112	All others	Nov. 9, 1992
K113	All	June 8, 1989
K114	All	June 8, 1989
K115	All	June 8, 1989
K116	All	June 8, 1989
K117	Mixed with radioactive wastes	June 30, 1994
K117	All others	Nov. 9, 1992
K118	Mixed with radioactive wastes	June 30, 1994
K118	All others	Nov. 9, 1992
K123	Mixed with radioactive wastes	June 30, 1994
K123	All others	Nov. 9, 1992
K124	Mixed with radioactive wastes	June 30, 1994
K124	All others	Nov. 9, 1992
K125	Mixed with radioactive wastes	June 30, 1994
K125	All others	Nov. 9, 1992
K126	Mixed with radioactive wastes	June 30, 1994
K126	All others	Nov. 9, 1992
K131	Mixed with radioactive wastes	June 30, 1994
K131	All others	Nov. 9, 1992
K132	Mixed with radioactive wastes	June 30, 1994
K132	All others	Nov. 9, 1992
K136	Mixed with radioactive wastes	June 30, 1994
K136	All others	Nov. 9, 1992
K141	Mixed with radioactive wastes	Sep. 19, 1996

K141	All others	Dec. 19, 1994
K142	Mixed with radioactive wastes	Sep. 19, 1996.
K142	All others	Dec. 19, 1994
K143	Mixed with radioactive wastes	Sep. 19, 1996
K143	All others	Dec. 19, 1994
K144	Mixed with radioactive wastes	Sep. 19, 1996
K144	All others	Dec. 19, 1994
K145	Mixed with radioactive wastes	Sep. 19, 1996
K145	All others	Dec. 19, 1994
K147	Mixed with radioactive wastes	Sep. 19, 1996
K147	All others	Dec. 19, 1994
K148	Mixed with radioactive wastes	Sep. 19, 1996
K148	All others	Dec. 19, 1994
K149	Mixed with radioactive wastes	Sep. 19, 1996
K149	All others	Dec. 19, 1994
K150	Mixed with radioactive wastes	Sep. 19, 1996
K150	All others	Dec. 19, 1994
K151	Mixed with radioactive wastes	Sep. 19, 1996
K151	All others	Dec. 19, 1994
K156	Mixed with radioactive wastes	Apr. 8, 1998
K156	All others	July 8, 1996
K157	Mixed with radioactive wastes	Apr. 8, 1998
K157	All others	July 8, 1996
K158	Mixed with radioactive wastes	Apr. 8, 1998
K158	All others	July 8, 1996
K159	Mixed with radioactive wastes	Apr. 8, 1998
K159	All others	July 8, 1996
K160	Mixed with radioactive wastes	Apr. 8, 1998
K160	All others	July 8, 1996
K161	Mixed with radioactive wastes	Apr. 8, 1998
K161	All others	July 8, 1996
P001	All	Aug. 8, 1990
P002	All	Aug. 8, 1990
P003	All	Aug. 8, 1990
P004	All	Aug. 8, 1990
P005	All	Aug. 8, 1990
P006	All	Aug. 8, 1990
P007	All	Aug. 8, 1990
P008	All	Aug. 8, 1990
P009	All	Aug. 8, 1990
P010	Wastewater	Aug. 8, 1990
P010	Nonwastewater	May 8, 1992
P011	Wastewater	Aug. 8, 1990
P011	Nonwastewater	May 8, 1992
P012	Wastewater	Aug. 8, 1990
P012	Nonwastewater	May 8, 1992
P013 (barium)	Nonwastewater	Aug. 8, 1990
P013	All others	June 8, 1989
P014	All	Aug. 8, 1990
P015	All	Aug. 8, 1990
P016	All	Aug. 8, 1990
P017	All	Aug. 8, 1990
P018	All	Aug. 8, 1990
P020	All	Aug. 8, 1990
P021	All	June 8, 1989
P022	All	Aug. 8, 1990
P023	All	Aug. 8, 1990
P024	All	Aug. 8, 1990
P026	All	Aug. 8, 1990
P027	All	Aug. 8, 1990

P028	All	Aug. 8, 1990
P029	All	June 8, 1989
P030	All	June 8, 1989
P031	All	Aug. 8, 1990
P033	All	Aug. 8, 1990
P034	All	Aug. 8, 1990
P036	Wastewater	Aug. 8, 1990
P036	Nonwastewater	May 8, 1992
P037	All	Aug. 8, 1990
P038	Wastewater	Aug. 8, 1990
P038	Nonwastewater	May 8, 1992
P039	All	June 8, 1989
P040	All	June 8, 1989
P041	All	June 8, 1989
P042	All	Aug. 8, 1990
P043	All	June 8, 1989
P044	All	June 8, 1989
P045	All	Aug. 8, 1990
P046	All	Aug. 8, 1990
P047	All	Aug. 8, 1990
P048	All	Aug. 8, 1990
P049	All	Aug. 8, 1990
P050	All	Aug. 8, 1990
P051	All	Aug. 8, 1990
P054	All	Aug. 8, 1990
P056	All	Aug. 8, 1990
P057	All	Aug. 8, 1990
P058	All	Aug. 8, 1990
P059	All	Aug. 8, 1990
P060	All	Aug. 8, 1990
P062	All	June 8, 1989
P063	All	June 8, 1989
P064	All	Aug. 8, 1990
P065	Wastewater	Aug. 8, 1990
P065	Nonwastewater	May 8, 1992
P066	All	Aug. 8, 1990
P067	All	Aug. 8, 1990
P068	All	Aug. 8, 1990
P069	All	Aug. 8, 1990
P070	All	Aug. 8, 1990
P071	All	June 8, 1989
P072	All	Aug. 8, 1990
P073	All	Aug. 8, 1990
P074	All	June 8, 1989
P075	All	Aug. 8, 1990
P076	All	Aug. 8, 1990
P077	All	Aug. 8, 1990
P078	All	Aug. 8, 1990
P081	All	Aug. 8, 1990
P082	All	Aug. 8, 1990
P084	All	Aug. 8, 1990
P085	All	June 8, 1989
P087	All	May 8, 1992
P088	All	Aug. 8, 1990
P089	All	June 8, 1989
P092	Wastewater	Aug. 8, 1990
P092	Nonwastewater	May 8, 1992
P093	All	Aug. 8, 1990
P094	All	June 8, 1989
P095	All	Aug. 8, 1990
P096	All	Aug. 8, 1990

P097	All	June 8, 1989
P098	All	June 8, 1989
P099 (silver)	Wastewater	Aug. 8, 1990
P099	All others	June 8, 1989
P101	All	Aug. 8, 1990
P102	All	Aug. 8, 1990
P103	All	Aug. 8, 1990
P104 (silver)	Wastewater	Aug. 8, 1990
P104	All others	June 8, 1989
P105	All	Aug. 8, 1990
P106	All	June 8, 1989
P108	All	Aug. 8, 1990
P109	All	June 8, 1989
P110	All	Aug. 8, 1990
P111	All	June 8, 1989
P112	All	Aug. 8, 1990
P113	All	Aug. 8, 1990
P114	All	Aug. 8, 1990
P115	All	Aug. 8, 1990
P116	All	Aug. 8, 1990
P118	All	Aug. 8, 1990
P119	All	Aug. 8, 1990
P120	All	Aug. 8, 1990
P121	All	June 8, 1989
P122	All	Aug. 8, 1990
P123	All	Aug. 8, 1990
P127	Mixed with radioactive wastes	Apr. 8, 1998
P127	All others	July 8, 1996
P128	Mixed with radioactive wastes	Apr. 8, 1998
P128	All others	July 8, 1996
P185	Mixed with radioactive wastes	Apr. 8, 1998
P185	All others	July 8, 1996
P188	Mixed with radioactive wastes	Apr. 8, 1998
P188	All others	July 8, 1996
P189	Mixed with radioactive wastes	Apr. 8, 1998
P189	All others	July 8, 1996
P190	Mixed with radioactive wastes	Apr. 8, 1998
P190	All others	July 8, 1996
P191	Mixed with radioactive wastes	Apr. 8, 1998
P191	All others	July 8, 1996
P192	Mixed with radioactive wastes	Apr. 8, 1998
P192	All others	July 8, 1996
P194	Mixed with radioactive wastes	Apr. 8, 1998
P194	All others	July 8, 1996
P196	Mixed with radioactive wastes	Apr. 8, 1998
P196	All others	July 8, 1996
P197	Mixed with radioactive wastes	Apr. 8, 1998
P197	All others	July 8, 1996
P198	Mixed with radioactive wastes	Apr. 8, 1998
P198	All others	July 8, 1996
P199	Mixed with radioactive wastes	Apr. 8, 1998
P199	All others	July 8, 1996
P201	Mixed with radioactive wastes	Apr. 8, 1998
P201	All others	July 8, 1996
P202	Mixed with radioactive wastes	Apr. 8, 1998
P202	All others	July 8, 1996
P203	Mixed with radioactive wastes	Apr. 8, 1998
P203	All others	July 8, 1996
P204	Mixed with radioactive wastes	Apr. 8, 1998
P204	All others	July 8, 1996
P205	Mixed with radioactive wastes	Apr. 8, 1998

P205	All others	July 8, 1996
U001	All	Aug. 8, 1990
U002	All	Aug. 8, 1990
U003	All	Aug. 8, 1990
U004	All	Aug. 8, 1990
U005	All	Aug. 8, 1990
U006	All	Aug. 8, 1990
U007	All	Aug. 8, 1990
U008	All	Aug. 8, 1990
U009	All	Aug. 8, 1990
U010	All	Aug. 8, 1990
U011	All	Aug. 8, 1990
U012	All	Aug. 8, 1990
U014	All	Aug. 8, 1990
U015	All	Aug. 8, 1990
U016	All	Aug. 8, 1990
U017	All	Aug. 8, 1990
U018	All	Aug. 8, 1990
U019	All	Aug. 8, 1990
U020	All	Aug. 8, 1990
U021	All	Aug. 8, 1990
U022	All	Aug. 8, 1990
U023	All	Aug. 8, 1990
U024	All	Aug. 8, 1990
U025	All	Aug. 8, 1990
U026	All	Aug. 8, 1990
U027	All	Aug. 8, 1990
U028	All	June 8, 1989
U029	All	Aug. 8, 1990
U030	All	Aug. 8, 1990
U031	All	Aug. 8, 1990
U032	All	Aug. 8, 1990
U033	All	Aug. 8, 1990
U034	All	Aug. 8, 1990
U035	All	Aug. 8, 1990
U036	All	Aug. 8, 1990
U037	All	Aug. 8, 1990
U038	All	Aug. 8, 1990
U039	All	Aug. 8, 1990
U041	All	Aug. 8, 1990
U042	All	Aug. 8, 1990
U043	All	Aug. 8, 1990
U044	All	Aug. 8, 1990
U045	All	Aug. 8, 1990
U046	All	Aug. 8, 1990
U047	All	Aug. 8, 1990
U048	All	Aug. 8, 1990
U049	All	Aug. 8, 1990
U050	All	Aug. 8, 1990
U051	All	Aug. 8, 1990
U052	All	Aug. 8, 1990
U053	All	Aug. 8, 1990
U055	All	Aug. 8, 1990
U056	All	Aug. 8, 1990
U057	All	Aug. 8, 1990
U058	All	June 8, 1989
U059	All	Aug. 8, 1990
U060	All	Aug. 8, 1990
U061	All	Aug. 8, 1990
U062	All	Aug. 8, 1990
U063	All	Aug. 8, 1990

U064	All	Aug. 8, 1990
U066	All	Aug. 8, 1990
U067	All	Aug. 8, 1990
U068	All	Aug. 8, 1990
U069	All	June 30, 1992
U070	All	Aug. 8, 1990
U071	All	Aug. 8, 1990
U072	All	Aug. 8, 1990
U073	All	Aug. 8, 1990
U074	All	Aug. 8, 1990
U075	All	Aug. 8, 1990
U076	All	Aug. 8, 1990
U077	All	Aug. 8, 1990
U078	All	Aug. 8, 1990
U079	All	Aug. 8, 1990
U080	All	Aug. 8, 1990
U081	All	Aug. 8, 1990
U082	All	Aug. 8, 1990
U083	All	Aug. 8, 1990
U084	All	Aug. 8, 1990
U085	All	Aug. 8, 1990
U086	All	Aug. 8, 1990
U087	All	June 8, 1989
U088	All	June 8, 1989
U089	All	Aug. 8, 1990
U090	All	Aug. 8, 1990
U091	All	Aug. 8, 1990
U092	All	Aug. 8, 1990
U093	All	Aug. 8, 1990
U094	All	Aug. 8, 1990
U095	All	Aug. 8, 1990
U096	All	Aug. 8, 1990
U097	All	Aug. 8, 1990
U098	All	Aug. 8, 1990
U099	All	Aug. 8, 1990
U101	All	Aug. 8, 1990
U102	All	June 8, 1989
U103	All	Aug. 8, 1990
U105	All	Aug. 8, 1990
U106	All	Aug. 8, 1990
U107	All	June 8, 1989
U108	All	Aug. 8, 1990
U109	All	Aug. 8, 1990
U110	All	Aug. 8, 1990
U111	All	Aug. 8, 1990
U112	All	Aug. 8, 1990
U113	All	Aug. 8, 1990
U114	All	Aug. 8, 1990
U115	All	Aug. 8, 1990
U116	All	Aug. 8, 1990
U117	All	Aug. 8, 1990
U118	All	Aug. 8, 1990
U119	All	Aug. 8, 1990
U120	All	Aug. 8, 1990
U121	All	Aug. 8, 1990
U122	All	Aug. 8, 1990
U123	All	Aug. 8, 1990
U124	All	Aug. 8, 1990
U125	All	Aug. 8, 1990
U126	All	Aug. 8, 1990
U127	All	Aug. 8, 1990

U128	All	Aug. 8, 1990
U129	All	Aug. 8, 1990
U130	All	Aug. 8, 1990
U131	All	Aug. 8, 1990
U132	All	Aug. 8, 1990
U133	All	Aug. 8, 1990
U134	All	Aug. 8, 1990
U135	All	Aug. 8, 1990
U136	Wastewater	Aug. 8, 1990
U136	Nonwastewater	May 8, 1992
U137	All	Aug. 8, 1990
U138	All	Aug. 8, 1990
U140	All	Aug. 8, 1990
U141	All	Aug. 8, 1990
U142	All	Aug. 8, 1990
U143	All	Aug. 8, 1990
U144	All	Aug. 8, 1990
U145	All	Aug. 8, 1990
U146	All	Aug. 8, 1990
U147	All	Aug. 8, 1990
U148	All	Aug. 8, 1990
U149	All	Aug. 8, 1990
U150	All	Aug. 8, 1990
U151	Wastewater	Aug. 8, 1990
U151	Nonwastewater	May 8, 1992
U152	All	Aug. 8, 1990
U153	All	Aug. 8, 1990
U154	All	Aug. 8, 1990
U155	All	Aug. 8, 1990
U156	All	Aug. 8, 1990
U157	All	Aug. 8, 1990
U158	All	Aug. 8, 1990
U159	All	Aug. 8, 1990
U160	All	Aug. 8, 1990
U161	All	Aug. 8, 1990
U162	All	Aug. 8, 1990
U163	All	Aug. 8, 1990
U164	All	Aug. 8, 1990
U165	All	Aug. 8, 1990
U166	All	Aug. 8, 1990
U167	All	Aug. 8, 1990
U168	All	Aug. 8, 1990
U169	All	Aug. 8, 1990
U170	All	Aug. 8, 1990
U171	All	Aug. 8, 1990
U172	All	Aug. 8, 1990
U173	All	Aug. 8, 1990
U174	All	Aug. 8, 1990
U176	All	Aug. 8, 1990
U177	All	Aug. 8, 1990
U178	All	Aug. 8, 1990
U179	All	Aug. 8, 1990
U180	All	Aug. 8, 1990
U181	All	Aug. 8, 1990
U182	All	Aug. 8, 1990
U183	All	Aug. 8, 1990
U184	All	Aug. 8, 1990
U185	All	Aug. 8, 1990
U186	All	Aug. 8, 1990
U187	All	Aug. 8, 1990
U188	All	Aug. 8, 1990

U189	All	Aug. 8, 1990
U190	All	June 8, 1989.
U191	All	Aug. 8, 1990
U192	All	Aug. 8, 1990
U193	All	Aug. 8, 1990
U194	All	June 8, 1989
U196	All	Aug. 8, 1990
U197	All	Aug. 8, 1990
U200	All	Aug. 8, 1990
U201	All	Aug. 8, 1990
U202	All	Aug. 8, 1990
U203	All	Aug. 8, 1990
U204	All	Aug. 8, 1990
U205	All	Aug. 8, 1990
U206	All	Aug. 8, 1990
U207	All	Aug. 8, 1990
U208	All	Aug. 8, 1990
U209	All	Aug. 8, 1990
U210	All	Aug. 8, 1990
U211	All	Aug. 8, 1990
U213	All	Aug. 8, 1990
U214	All	Aug. 8, 1990
U215	All	Aug. 8, 1990
U216	All	Aug. 8, 1990
U217	All	Aug. 8, 1990
U218	All	Aug. 8, 1990
U219	All	Aug. 8, 1990
U220	All	Aug. 8, 1990
U221	All	June 8, 1989.
U222	All	Aug. 8, 1990
U223	All	June 8, 1989.
U225	All	Aug. 8, 1990
U226	All	Aug. 8, 1990
U227	All	Aug. 8, 1990
U228	All	Aug. 8, 1990
U234	All	Aug. 8, 1990
U235	All	June 8, 1989.
U236	All	Aug. 8, 1990
U237	All	Aug. 8, 1990
U238	All	Aug. 8, 1990
U239	All	Aug. 8, 1990
U240	All	Aug. 8, 1990
U243	All	Aug. 8, 1990
U244	All	Aug. 8, 1990
U246	All	Aug. 8, 1990
U247	All	Aug. 8, 1990
U248	All	Aug. 8, 1990
U249	All	Aug. 8, 1990
U271	Mixed with radioactive wastes	Apr. 8, 1998
U271	All others	July 8, 1996
U277	Mixed with radioactive wastes	Apr. 8, 1998
U277	All others	July 8, 1996
U278	Mixed with radioactive wastes	Apr. 8, 1998
U278	All others	July 8, 1996
U279	Mixed with radioactive wastes	Apr. 8, 1998
U279	All others	July 8, 1996
U280	Mixed with radioactive wastes	Apr. 8, 1998
U280	All others	July 8, 1996
U328	Mixed with radioactive wastes	June 30, 1994
U328	All others	Nov. 9, 1992
U353	Mixed with radioactive wastes	June 30, 1994

U353	All others	Nov. 9, 1992
U359	Mixed with radioactive wastes	June 30, 1994
U359	All others	Nov. 9, 1992
U364	Mixed with radioactive wastes	Apr. 8, 1998
U364	All others	July 8, 1996
U365	Mixed with radioactive wastes	Apr. 8, 1998
U365	All others	July 8, 1996
U366	Mixed with radioactive wastes	Apr. 8, 1998
U366	All others	July 8, 1996
U367	Mixed with radioactive wastes	Apr. 8, 1998
U367	All others	July 8, 1996
U372	Mixed with radioactive wastes	Apr. 8, 1998
U372	All others	July 8, 1996
U373	Mixed with radioactive wastes	Apr. 8, 1998
U373	All others	July 8, 1996
U375	Mixed with radioactive wastes	Apr. 8, 1998
U375	All others	July 8, 1996
U376	Mixed with radioactive wastes	Apr. 8, 1998
U376	All others	July 8, 1996
U377	Mixed with radioactive wastes	Apr. 8, 1998
U377	All others	July 8, 1996
U378	Mixed with radioactive wastes	Apr. 8, 1998
U378	All others	July 8, 1996
U379	Mixed with radioactive wastes	Apr. 8, 1998
U379	All others	July 8, 1996
U381	Mixed with radioactive wastes	Apr. 8, 1998
U381	All others	July 8, 1996
U382	Mixed with radioactive wastes	Apr. 8, 1998
U382	All others	July 8, 1996
U383	Mixed with radioactive wastes	Apr. 8, 1998
U383	All others	July 8, 1996
U384	Mixed with radioactive wastes	Apr. 8, 1998
U384	All others	July 8, 1996
U385	Mixed with radioactive wastes	Apr. 8, 1998
U385	All others	July 8, 1996
U386	Mixed with radioactive wastes	Apr. 8, 1998
U386	All others	July 8, 1996
U387	Mixed with radioactive wastes	Apr. 8, 1998
U387	All others	July 8, 1996
U389	Mixed with radioactive wastes	Apr. 8, 1998
U389	All others	July 8, 1996
U390	Mixed with radioactive wastes	Apr. 8, 1998
U390	All others	July 8, 1996
U391	Mixed with radioactive wastes	Apr. 8, 1998
U391	All others	July 8, 1996
U392	Mixed with radioactive wastes	Apr. 8, 1998
U392	All others	July 8, 1996
U393	Mixed with radioactive wastes	Apr. 8, 1998
U393	All others	July 8, 1996
U394	Mixed with radioactive wastes	Apr. 8, 1998
U394	All others	July 8, 1996
U395	Mixed with radioactive wastes	Apr. 8, 1998
U395	All others	July 8, 1996
U396	Mixed with radioactive wastes	Apr. 8, 1998
U396	All others	July 8, 1996
U400	Mixed with radioactive wastes	Apr. 8, 1998
U400	All others	July 8, 1996
U401	Mixed with radioactive wastes	Apr. 8, 1998
U401	All others	July 8, 1996
U402	Mixed with radioactive wastes	Apr. 8, 1998
U402	All others	July 8, 1996

U403	Mixed with radioactive wastes	Apr. 8, 1998
U403	All others	July 8, 1996
U404	Mixed with radioactive wastes	Apr. 8, 1998
U404	All others	July 8, 1996
U407	Mixed with radioactive wastes	Apr. 8, 1998
U407	All others	July 8, 1996
U409	Mixed with radioactive wastes	Apr. 8, 1998
U409	All others	July 8, 1996
U410	Mixed with radioactive wastes	Apr. 8, 1998
U410	All others	July 8, 1996
U411	Mixed with radioactive wastes	Apr. 8, 1998
U411	All others	July 8, 1996

FOOTNOTE:[a] This table does not include mixed radioactive wastes (from the First, Second, and Third Third rules) which received national capacity variance until May 8, 1992. This table also does not include contaminated soil and debris wastes.

FOOTNOTE:[b] The standard was revised in the Third Third Final Rule (55 FR 22520, June 1, 1990).

FOOTNOTE:[c] The standard was revised in the Third Third Emergency Rule (58 FR 29860, May 24, 1993); the original effective date was August 8, 1990.

FOOTNOTE:[d] The standard was revised in the Phase II Final Rule (59 FR 47982, Sept. 19, 1994); the original effective date was August 8, 1990.

FOOTNOTE:[e] The standards for selected reactive wastes were revised in the Phase III Final Rule (61 FR 15566, Apr. 8, 1996); the original effective date was August 8, 1990.

TABLE 2.-SUMMARY OF EFFECTIVE DATES OF LAND DISPOSAL RESTRICTIONS FOR CONTAMINATED SOIL AND DEBRIS (CSD)

	Restricted Hazardous Waste in CSD	Effective Date
1.	Solvent-(F001--F005) and dioxin-(F020--F023 and F026--F028) containing soil and debris from CERCLA response of RCRA corrective actions	Nov. 8, 1990
2.	Soil and debris not from CERCLA response or RCRA corrective actions contaminated with less than 1% total solvents (F001--F005) or dioxins (F020--F023 and F026--F028)	Nov. 8, 1988
3.	All soil and debris contaminated with First Third wastes for which treatment standards are based on incineration	Aug. 8, 1990
4.	All soil and debris contaminated with Second Third wastes for which treatment standards are based on incineration	June 8, 1991
5.	All soil and debris contaminated with Third Third wastes or, First or Second Third "soft hammer" wastes which had treatment standards promulgated in the Third Third rule, for which treatment standards are based on incineration, vitrification, or mercury retorting, acid leaching followed by chemical precipitation, or thermal recovery of metals; as well as all inorganic solids debris contaminated with D004--D011 wastes, and all soil and debris contaminated with mixed RCRA/radioactive wastes	May 8, 1992
6.	Soil and debris contaminated with D012--D043, K141--K145, and K147--K151 wastes	Dec. 19, 1994
7.	Debris (only) contaminated with F037, F038, K107--K112, K117, K118, K123--K126, K131, K132, K136, U328, U353, U359	Dec. 19, 1994
8.	Soil and debris contaminated with K156--K161, P127, P128, P188--P192, P194, P196--P199, P201--P205, U271, U277--U280, U364--U367, U372, U373, U375--U379, U381--U387, U389--U396, U400--U404, U407, and U409--U411 wastes	July 8, 1996
9.	Soil and debris contaminated with K088 wastes	Oct. 8, 1997
10.	Soil and debris contaminated with radioactive wastes mixed with K088, K156--K161, P127, P128, P188--P192, P194, P196--P199, P201--P205, U271, U277--U280, U364--U367, U372, U373, U375--U379, U381--U387, U389--U396, U400--U404, U407, and U409--U411 wastes	Apr. 8, 1998

11. Soil and debris contaminated with F032, F034, and F035	May 12, 1997
12. Soil and debris contaminated with newly identified D004--D011 toxicity characteristic wastes and mineral processing wastes	Aug. 24, 1998
13. Soil and debris contaminated with mixed radioactive newly identified D004--D011 characteristic wastes and mineral processing wastes	May 26, 2000

(NOTE: Appendix VII is provided for the convenience of the reader.)
(NOTE: A contaminated soil and debris rule will be promulgated in the future.)

Appendix VIII - LDR Effective Dates of Injected Prohibited Hazardous Waste [40 CFR 268 Appendix VIII]

NATIONAL CAPACITY LDR VARIANCES FOR UIC WASTES[a]

Waste Code	Waste Category	Effective Date
F001--F005	All spent F001--F005 solvent containing less than 1 percent total F001--F005 solvent constituents	Aug. 8, 1990
D001 (except High TOC Ignitable Liquids Subcategory)[c]	All	Feb. 10, 1994
D001 (High TOC Ignitable Characteristic Liquids Subcategory)	Nonwastewater	Sept. 19, 1995
D002[b]	All	May 8, 1992
D002[c]	All	Feb. 10, 1994
D003 (cyanides)	All	May 8, 1992
D003 (sulfides)	All	May 8, 1992
D003 (explosives, reactives)	All	May 8, 1992
D007	All	May 8, 1992
D009	Nonwastewater	May 8, 1992
D012	All	Sept. 19, 1995
D013	All	Sept. 19, 1995
D014	All	Sept. 19, 1995
D015	All	Sept. 19, 1995
D016	All	Sept. 19, 1995
D017	All	Sept. 19, 1995
D018	All, including mixed with radioactive wastes	Apr. 8, 1998

D019	All, including mixed with radioactive wastes	Apr. 8, 1998
D020	All, including mixed with radioactive wastes	Apr. 8, 1998
D021	All, including mixed with radioactive wastes	Apr. 8, 1998
D022	All, including mixed with radioactive wastes	Apr. 8, 1998
D023	All, including mixed radioactive wastes	Apr. 8, 1998
D024	All, including mixed radioactive wastes	Apr. 8, 1998
D025	All, including mixed radioactive wastes	Apr. 8, 1998
D026	All, including mixed radioactive wastes	Apr. 8, 1998
D027	All, including mixed radioactive wastes	Apr. 8, 1998
D028	All, including mixed radioactive wastes	Apr. 8, 1998
D029	All, including mixed radioactive wastes	Apr. 8, 1998
D030	All, including mixed radioactive wastes	Apr. 8, 1998
D031	All, including mixed radioactive wastes	Apr. 8, 1998
D032	All, including mixed radioactive wastes	Apr. 8, 1998
D033	All, including mixed radioactive wastes	Apr. 8, 1998
D034	All, including mixed radioactive wastes	Apr. 8, 1998
D035	All, including mixed radioactive wastes	Apr. 8, 1998
D036	All, including mixed radioactive wastes	Apr. 8, 1998
D037	All, including mixed radioactive wastes	Apr. 8, 1998
D038	All, including mixed radioactive wastes	Apr. 8, 1998
D039	All, including mixed radioactive	Apr. 8, 1998

	wastes	
D040	All, including mixed radioactive wastes	Apr. 8, 1998
D041	All, including mixed radioactive wastes	Apr. 8, 1998
D042	All, including mixed radioactive wastes	Apr. 8, 1998
D043	All, including mixed radioactive wastes	Apr. 8, 1998
F007	All	June 8, 1991
F032	All, including mixed radioactive wastes	May 12, 1999
F034	All, including mixed radioactive wastes	May 12, 1999
F035	All, including mixed radioactive wastes	May 12, 1999
F037	All	Nov. 8, 199
F038	All	Nov. 8, 1992
F039	Wastewater	May 8, 1992
K009	Wastewater	June 8, 1991
K011	Nonwastewater	June 8, 1991
K011	Wastewater	May 8, 1992
K013	Nonwastewater	June 8, 1991
K013	Wastewater	May 8, 1992
K014	All	May 8, 1992
K016 (dilute)	All	June 8, 1991
K049	All	Aug. 8, 1990
K050	All	Aug. 8, 1990
K051	All	Aug. 8, 1990
K052	All	Aug. 8, 1990
K062	All	Aug. 8, 1990
K071	All	Aug. 8, 1990
K088	All	Jan. 8, 1997
K104	All	Aug. 8, 1990

K107	All	Nov. 8, 1992.
K108	All	Nov. 9, 1992
K109	All	Nov. 9, 1992
K110	All	Nov. 9, 1992
K111	All	Nov. 9, 1992
K112	All	Nov. 9, 1992
K117	All	June 30, 1995
K118	All	June 30, 1995
K123	All	Nov. 9, 1992
K124	All	Nov. 9, 1992
K125	All	Nov. 9, 1992
K126	All	Nov. 9, 1992
K131	All	June 30, 1995
K132	All	June 30, 1995
K136	All	Nov. 9, 1992
K141	All	Dec. 19, 1994
K142	All	Dec. 19, 1994
K143	All	Dec. 19, 1994
K144	All	Dec. 19, 1994
K145	All	Dec. 19, 1994
K147	All	Dec. 19, 1994
K148	All	Dec. 19, 1994
K149	All	Dec. 19, 1994
K150	All	Dec. 19, 1994
K151	All	Dec. 19, 1994
K156	All	July 8, 1996
K157	All	July 8, 1996.
K158	All	July 8, 1996
K159	All	July 8, 1996
K160	All	July 8, 1996
K161	All	July 8, 1996

NA	Newly identified mineral processing wastes from titanium dioxide production and mixed radioactive/newly identified D004-D011 characteristic wastes and mineral process wastes	May 26, 2000.
P127	All	July 8, 1996
P128	All	July 8, 1996
P185	All	July 8, 1996
P188	All	July 8, 1996
P189	All	July 8, 1996
P190	All	July 8, 1996
P191	All	July 8, 1996
P192	All	July 8, 1996
P194	All	July 8, 1996
P196	All	July 8, 1996
P197	All	July 8, 1996
P198	All	July 8, 1996
P199	All	July 8, 1996
P201	All	July 8, 1996
P202	All	July 8, 1996
P203	All	July 8, 1996
P204	All	July 8, 1996
P205	All	July 8, 1996
U271	All	July 8, 1996
U277	All	July 8, 1996
U278	All	July 8, 1996
U279	All	July 8, 1996
U280	All	July 8, 1996
U328	All	Nov. 9, 1992
U353	All	Nov. 9, 1992
U359	All	Nov. 9, 1992
U364	All	July 8, 1996

U365	All	July 8, 1996
U366	All	July 8, 1996
U367	All	July 8, 1996
U372	All	July 8, 1996
U373	All	July 8, 1996
U375	All	July 8, 1996
U376	All	July 8, 1996
U377	All	July 8, 1996
U378	All	July 8, 1996
U379	All	July 8, 1996
U381	All	July 8, 1996
U382	All	July 8, 1996
U383	All	July 8, 1996
U384	All	July 8, 1996
U385	All	July 8, 1996
U386	All	July 8, 1996
U387	All	July 8, 1996
U389	All	July 8, 1996
U390	All	July 8, 1996
U391	All	July 8, 1996
U392	All	July 8, 1996
U395	All	July 8, 1996
U396	All	July 8, 1996
U400	All	July 8, 1996
U401	All	July 8, 1996
U402	All	July 8, 1996
U403	All	July 8, 1996
U404	All	July 8, 1996
U407	All	July 8, 1996
U409	All	July 8, 1996

U410	All	July 8, 1996
U411	All	July 8, 1996

FOOTNOTE:[a] Wastes that are deep well disposed on-site receive a six-month variance, with restrictions effective in November 1990.

FOOTNOTE:[b] Deepwell injected D002 liquids with a pH less than 2 must meet the California List treatment standards on August 8, 1990.

FOOTNOTE:[c] Managed in systems defined in 40 CFR 144.6(e) and 14.6(e) as Class V injection wells, that do not engage in CWA-equivalent treatment before injection.

(NOTE: This table is provided for the convenience of the reader.)

Appendix IX – (Reserved) Extraction Procedure (EP) Toxicity Test Method and Structural Integrity Test (Method 1310B) [40 CFR 268 Appendix IX]

(* Note: The EP (Method 1310B) is published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, listed in 40 CFR 260.11; Rule 0400-12-01-.01(2)(b)1.)

Appendix X - (RESERVED) [40 CFR 268 Appendix X]

Appendix XI - Metal Bearing Wastes Prohibited from Dilution in a Combustion Unit According to Part (1)(c)3[a] of this Rule

Waste Code	Waste Description
D004	Toxicity Characteristic for Arsenic
D005	Toxicity Characteristic for Barium
D006	Toxicity Characteristic for Cadmium
D007	Toxicity Characteristic for Chromium
D008	Toxicity Characteristic for Lead
D009	Toxicity Characteristic for Mercury
D010	Toxicity Characteristic for Selenium
D011	Toxicity Characteristic for Silver
F006	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum
F007	Spent cyanide plating bath solutions from electroplating operations
F008	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process
F009	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process
F010	Quenching bath residues from oil baths from metal treating operations where cyanides are used in the process
F011	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations
F012	Quenching waste water treatment sludges from metal heat treating operations where cyanides are used in the process

Waste Code	Waste Description
F019	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum car washing when such phosphating is an exclusive conversion coating process
K002	Wastewater treatment sludge from the production of chrome yellow and orange pigments
K003	Wastewater treatment sludge from the production of molybdate orange pigments
K004	Wastewater treatment sludge from the production of zinc yellow pigments
K005	Wastewater treatment sludge from the production of chrome green pigments
K006	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated)
K007	Wastewater treatment sludge from the production of iron blue pigments.
K008	Oven residue from the production of chrome oxide green pigments
K061	Emission control dust/sludge from the primary production of steel in electric furnaces
K069	Emission control dust/sludge from secondary lead smelting
K071	Brine purification muds from the mercury cell processes in chlorine production, where separately prepurified brine is not used
K100	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting
K106	Sludges from the mercury cell processes for making chlorine
P010	Arsenic acid H_3AsO_4
P011	Arsenic oxide As_2O_5
P012	Arsenic trioxide
P013	Barium cyanide
P015	Beryllium
P029	Copper cyanide Cu(CN)
P074	Nickel cyanide $Ni(CN)_2$
P087	Osmium tetroxide
P099	Potassium silver cyanide
P104	Silver cyanide
P113	Thallic oxide
P114	Thallium (I) selenite
P115	Thallium (I) sulfate
P119	Ammonium vanadate
P120	Vanadium oxide V_2O_5
P121	Zinc cyanide
U032	Calcium chromate

Waste Code	Waste Description
U145	Lead phosphate
U151	Mercury
U204	Selenious acid
U205	Selenium disulfide
U216	Thallium (I) chloride
U217	Thallium (I) nitrate

FOOTNOTE:[a] A combustion unit is defined as any thermal technology subject to Rule 0400-12-01-.05(15); 0400-12-01-.06(15); and/or 0400-12-01-.09(8).

Authority: T.C.A. §§68-212-101 et seq. and 4-5-201 et seq.

0400-12-01-.11 Standards for the Management of Used Oil.

(1) Definitions [40 CFR 279 Subpart A]

(a) Definitions [40 CFR 279.1]

Terms that are defined in Rules 0400-12-01-.01(2)(a), 0400-12-01-.02(1)(a), and 40 CFR 280.12 have the same meanings when used in this rule.

"Aboveground tank" means a tank used to store or process used oil that is not an underground storage tank as defined in Rule 1200-01-15-.01.

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

"Do-it-yourselfer used oil collection center" means any site or facility that accepts/aggregates and stores used oil collected only from household do-it-yourselfers.

"Existing tank" means a tank that is used for the storage or processing of used oil and that is in operation or for which installation has commenced on or prior to July 7, 1995, the effective date of Tennessee's authorized used oil program. Installation will be considered to have commenced if the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin installation of the tank and if either:

1. A continuous on-site installation program has begun; or

2. The owner or operator has entered into contractual obligations-which cannot be canceled or modified without substantial loss-for installation of the tank to be completed within a reasonable time.

"Household `do-it-yourselfer' used oil" means oil that is derived from households, such as used oil generated by individuals who generate used oil through the maintenance of their personal vehicles.

"Household `do-it-yourselfer' used oil generator" means an individual who generates household "do-it-yourselfer" used oil.

"New tank" means a tank that will be used to store or process used oil and for which installation has commenced after July 7, 1995, the effective date of Tennessee's authorized used oil program.

"Petroleum refining facility" means an establishment primarily engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, and lubricants, through fractionation, straight distillation of crude oil, redistillation of unfinished petroleum derivatives, cracking or other processes (i.e., facilities classified as SIC 2911).

"Processing" means chemical or physical operations designed to produce from used oil, or to make used oil more amenable for production of, fuel oils, lubricants, or other used oil-derived product. Processing includes, but is not limited to: blending used oil with virgin petroleum products, blending used oils to meet the fuel specification, filtration, simple distillation, chemical or physical separation and re-refining.

"Re-refining distillation bottoms" means the heavy fraction produced by vacuum distillation of filtered and dehydrated used oil. The composition of still bottoms varies with column operation and feedstock.

"Tank" means any stationary device, designed to contain an accumulation of used oil which is constructed primarily of non-earthen materials, (e.g., wood, concrete, steel, plastic) which provides structural support.

"Used oil" means any oil that has been refined from crude oil, or any synthetic oil, that has been

used and as a result of such use is contaminated by physical or chemical impurities.

"Used oil aggregation point" means any site or facility that accepts, aggregates, and/or stores used oil collected only from other used oil generation sites owned or operated by the owner or operator of the aggregation point, from which used oil is transported to the aggregation point in shipments of no more than 55 gallons. Used oil aggregation points may also accept used oil from household do-it-yourselfers.

"Used oil burner" means a facility where used oil not meeting the specification requirements in subparagraph (2)(b) of this rule is burned for energy recovery in devices identified in part (7)(b)1 of this rule.

"Used oil collection center" means any site or facility that is registered, licensed, permitted, or recognized by a state, county, or municipal government to manage used oil and accepts/aggregates and stores used oil collected from used oil generators regulated under paragraph (3) of this rule who bring used oil to the collection center in shipments of no more than 55 gallons under the provisions of subparagraph (3)(d) of this rule. Used oil collection centers may also accept used oil from household do-it-yourselfers.

"Used oil fuel marketer" means any person who conducts either of the following activities:

1. Directs a shipment of off-specification used oil from their facility to a used oil burner; or

2. First claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in subparagraph (2)(b) of this rule.

"Used oil generator" means any person, by site, whose act or process produces used oil or whose act first causes used oil to become subject to regulation.

"Used oil processor/re-refiner" means a facility that processes used oil.

"Used oil transfer facility" means any transportation related facility including loading docks, parking areas, storage areas, and other areas where shipments of used oil are held for more than 24 hours and not longer than 35 days during the normal course of transportation or prior to an activity performed pursuant to subpart (3)(a)2(ii) of this rule. Transfer facilities that store used oil for more than 35 days are subject to regulation under paragraph (6) of this rule.

"Used oil transporter" means any person who transports used oil, any person who collects used oil from more than one generator and transports the collected oil, and owners and operators of used oil transfer facilities. Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation but, with the following exception, may not process used oil. Transporters may conduct incidental processing operations that occur in the normal course of used oil transportation (e.g., settling and water separation), but that are not designed to produce (or make more amenable for production of) used oil derived products or used oil fuel.

(2) Applicability [40 CFR 279 Subpart B]

(a) Applicability [40 CFR 279.10]

This subparagraph identifies those materials which are subject to regulation as used oil under this rule. This subparagraph also identifies some materials that are not subject to regulation as used oil under this rule, and indicates whether these materials may be subject to regulation as hazardous waste under Rules 0400-12-01-.01 through .07, .09 and .10.

1. Used Oil

The Commissioner presumes that used oil is to be recycled unless a used oil handler disposes of used oil, or sends used oil for disposal. Except as provided in subparagraph (b) of this paragraph, the regulations of this rule apply to used oil, and to materials identified in this subparagraph as being subject to regulation as used oil, whether or not the used oil or material exhibits any characteristics of hazardous waste identified in Rule

0400-12-01-.02(3).

2. Mixtures of Used Oil and Hazardous Waste

(i) Listed Hazardous Waste.

(I) Mixtures of used oil and hazardous waste that is listed in Rule 0400-12-01-.02(4) are subject to regulation as hazardous waste under Rules 0400-12-01-.01 through .07, .09 and .10, rather than as used oil under this rule, except as subparts (ii) and (iii) of this part provide otherwise.

(II) Rebuttable Presumption for Used Oil

Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in Rule 0400-12-01-.02(4). Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Rule 0400-12-01-.02(5)(a) Appendix VIII).

I. The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement as described in part (3)(e)3 of this rule, to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.

II. The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

(ii) Characteristic Hazardous Waste

Mixtures of used oil and hazardous waste that solely exhibit one or more of the hazardous waste characteristics identified in Rule 0400-12-01-.02(3) and mixtures of used oil and hazardous waste that are listed in Rule 0400-12-01-.02(4) solely because they exhibit one or more of the characteristics of hazardous waste identified in Rule 0400-12-01-.02(3) are subject to:

(I) Except as provided in item (III) of this subpart, regulation as hazardous waste under Rules 0400-12-01-.01 through .07, .09 and .10 rather than as used oil under this rule, if the resultant mixture exhibits any characteristics of hazardous waste identified in Rule 0400-12-01-.02(3), or

(II) Except as specified in item (III) of this subpart, regulation as used oil under this rule, if the resultant mixture does not exhibit any characteristics of hazardous waste identified under Rule 0400-12-01-.02(3).

(III) Regulation as used oil under this rule, if the mixture is of used oil and a waste which is hazardous solely because it exhibits the characteristic of ignitability (e.g., ignitable-only mineral spirits), provided that the resultant mixture does not exhibit the characteristic of ignitability under Rule 0400-12-01-.02(3)(b).

(iii) Conditionally Exempt Small Quantity Generator Hazardous Waste

(I) In accordance with Rule 0400-12-01-.02(1)(e)10, mixtures of used oil and conditionally exempt small quantity generator hazardous waste are subject to regulation as used oil under this rule, provided the resultant mixture does not exhibit the characteristic of ignitability, corrosivity, or reactivity, in accordance with subparagraphs (3)(b), (c) or (d) of Rule 0400-12-01-.02.

(II) If the mixture exhibits the characteristic of ignitability, corrosivity, or reactivity, in accordance with subparagraphs (3)(b), (c) or (d) of Rule 0400-12-01-.02, then the mixture shall be managed as hazardous waste and not as used oil under this rule.

3. Materials Containing or Otherwise Contaminated with Used Oil

(i) Except as provided in subpart (ii) of this part, materials containing or otherwise contaminated with used oil from which the used oil has been properly drained or removed to the extent possible such that no visible signs of free-flowing oil remain in or on the material:

(I) Are not used oil and thus not subject to this rule, and

(II) If applicable, are subject to the hazardous waste regulations of Rules 0400-12-01-.01 through .07, .09 and .10.

(ii) Materials containing or otherwise contaminated with used oil that are burned for energy recovery are subject to regulation as used oil under this rule.

(iii) Used oil drained or removed from materials containing or otherwise contaminated with used oil is subject to regulation as used oil under this rule.

4. Mixtures of Used Oil with Products

(i) Except as provided in subpart (ii) of this part, mixtures of used oil and fuels or other fuel products are subject to regulation as used oil under this rule.

(ii) Mixtures of used oil and diesel fuel mixed on-site by the generator of the used oil for use in the generator's own vehicles are not subject to this rule once the used oil and diesel fuel have been mixed. Prior to mixing, the used oil is subject to the requirements of paragraph (3) of this rule.

5. Materials Derived from Used Oil

(i) Materials that are reclaimed from used oil that are used beneficially and are not burned for energy recovery or used in a manner constituting disposal (e.g., re-refined lubricants) are:

(I) Not used oil and thus are not subject to this rule and

(II) Not solid wastes and are thus not subject to the hazardous waste regulations of Rules 0400-12-01-.01 through .07, .09 and .10 as provided in Rule 0400-12-01-.02(1)(c)3(ii)(I).

(ii) Materials produced from used oil that are burned for energy recovery (e.g., used oil fuels) are subject to regulation as used oil under this rule.

(iii) Except as provided in subpart (iv) of this part, materials derived from used oil that are disposed of or used in a manner constituting disposal are:

(I) Not used oil and thus are not subject to this rule and

(II) Solid wastes and thus are subject to the hazardous waste regulations of Rules 0400-12-01-.01 through .07, .09 and .10, if the materials are listed or identified as hazardous waste.

(iv) Used oil re-refining distillation bottoms that are used as feedstock to manufacture asphalt products are not subject to this rule.

6. Wastewater

Wastewater, the discharge of which is subject to regulation under either the Tennessee Water Quality Control Act of 1977 or section 402 or section 307(b) of the Clean Water Act (including wastewaters at facilities which have eliminated the discharge of wastewater), contaminated with de minimis quantities of used oil are not subject to the requirements of this rule. For purposes of this part, "de minimis" quantities of used oils are defined as small spills, leaks, or drippings from pumps, machinery, pipes, and other similar equipment during normal operations or small amounts of oil lost to the wastewater treatment system during washing or draining operations. This exception will not apply if the used oil is discarded as a result of abnormal manufacturing operations resulting in substantial leaks, spills, or other releases, or to used oil recovered from wastewaters.

7. Used Oil Introduced Into Crude Oil Pipelines or a Petroleum Refining Facility

(i) Used oil mixed with crude oil or natural gas liquids (e.g., in a production separator or crude oil stock tank) for insertion into a crude oil pipeline is exempt from the requirements of this rule. The used oil is subject to the requirements of this rule prior to the mixing of used oil with crude oil or natural gas liquids.

(ii) Mixtures of used oil and crude oil or natural gas liquids containing less than 1% used oil that are being stored or transported to a crude oil pipeline or petroleum refining facility for insertion into the refining process at a point prior to crude distillation or catalytic cracking are exempt from the requirements of this rule.

(iii) Used oil that is inserted into the petroleum refining facility process before crude distillation or catalytic cracking without prior mixing with crude oil is exempt from the requirements of this rule provided that the used oil constitutes less than 1% of the crude oil feed to any petroleum refining facility process unit at any given time. Prior to insertion into the petroleum refining facility process, the used oil is subject to the requirements of this rule.

(iv) Except as provided in subpart (v) of this part, used oil that is introduced into a petroleum refining facility process after crude distillation or catalytic cracking is exempt from the requirements of this rule only if the used oil meets the specification of subparagraph (b) of this paragraph. Prior to insertion into the petroleum refining facility process, the used oil is subject to the requirements of this rule.

(v) Used oil that is incidentally captured by a hydrocarbon recovery system or wastewater treatment system as part of routine process operations at a petroleum refining facility and inserted into the petroleum refining facility process is exempt from the requirements of this rule. This exemption does not extend to used oil which is intentionally introduced into a hydrocarbon recovery system (e.g., by pouring collected used oil into the waste water treatment system).

(vi) Tank bottoms from stock tanks containing exempt mixtures of used oil and crude oil or natural gas liquids are exempt from the requirements of this rule.

8. Used Oil on Vessels

Used oil produced on vessels from normal shipboard operations is not subject to this rule until it is transported ashore.

9. Used Oil Containing PCBs

Used oil containing PCBs (as defined at 40 CFR 761.3) at any concentration less than 50 ppm is subject to the requirements of this rule unless, because of dilution, it is regulated under 40 CFR Part 761 as a used oil containing PCBs at 50 ppm or greater. PCB-containing used oil subject to the requirements of this rule may also be subject to the prohibitions and requirements found at 40 CFR Part 761, including §761.20(d) and (e). Used oil containing PCBs at concentrations of 50 ppm or greater is not subject to the requirements of this rule, but is subject to regulation under 40 CFR Part 761. No person may avoid these provisions by diluting used oil containing PCBs, unless otherwise specifically provided for in this rule or Part 761.

(b) Used Oil Specifications [40 CFR 279.11]

Used oil burned for energy recovery, and any fuel produced from used oil by processing, blending, or other treatment, is subject to regulation under this rule unless it is shown not to exceed any of the allowable levels of the constituents and properties shown in Table 1. Once used oil that is to be burned for energy recovery has been shown not to exceed any allowable level and the person making that showing complies with subparagraphs (8)(c) and (8)(d) and part (8)(e)2 of this rule, the used oil is no longer subject to this rule.

Table 1-Used Oil Not Exceeding Any Allowable Level Shown Below Is Not Subject to This Rule When Burned for Energy Recovery[1]

Constituent/property	Allowable level
Arsenic	5 ppm maximum.
Cadmium	2 ppm maximum.
Chromium	10 ppm maximum.
Lead	100 ppm maximum.
Flash point	100 °F minimum.
Total halogens	4,000 ppm maximum.[2]

FOOTNOTE: [1]The allowable levels do not apply to mixtures of used oil and hazardous waste that continue to be regulated as hazardous waste (see part (a)2 of this paragraph).

FOOTNOTE: [2]Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste under the rebuttable presumption provided under subpart (a)2(i) of this paragragh. Such used oil is subject to Rule 0400-12-01-.09(8) rather than this rule when burned for energy recovery unless the presumption of mixing can be successfully rebutted.

(c) Prohibitions [40 CFR 279.12]

1. Surface Impoundment Prohibition

Used oil shall not be managed in surface impoundments or waste piles unless the units are subject to regulation under Rules 0400-12-01-.05 or .06.

2. Use as a Dust Suppressant

The use of used oil as a dust suppressant is prohibited in Tennessee, as set forth in subparagraph (9)(c) of this rule.

3. Burning in Particular Units

Off-specification used oil fuel may be burned for energy recovery in only the following devices:

(i) Industrial furnaces identified in Rule 0400-12-01-.01(2)(a);

(ii) Boilers, as defined in Rule 0400-12-01-.01(2)(a), that are identified as follows:

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

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

(III) Used oil-fired space heaters provided that the burner meets the provisions of subparagraph (3)(d) of this rule.

(iii) Hazardous waste incinerators subject to regulation under Rules 0400-12-01-.05(15) or .06(15).

(d) Changes in Notification Data

The used oil marketers, processors/re-refiners and/or haulers/transporters shall notify the Department in writing within 30 days after changes in operational status (e.g., becoming inactive, or changes affecting certification, etc.).

(3) Standards for Used Oil Generators [40 CFR 279 Subpart C]

(a) Applicability [40 CFR 279.20]

1. General

Except as provided in subparts (i) through (iv) of this part, this paragraph applies to all used oil generators. A used oil generator is any person, by site, whose act or process produces used oil or whose act first causes used oil to become subject to regulation.

(i) Household "do-it-yourselfer" Used Oil Generators

Household "do-it-yourselfer" used oil generators are not subject to regulation under this rule.

(ii) Vessels

Vessels at sea or at port are not subject to this paragraph. For purposes of this paragraph, used oil produced on vessels from normal shipboard operations is considered to be generated at the time it is transported ashore. The owner or operator of the vessel and the person(s) removing or accepting used oil from the vessel are co-generators of the used oil and are both responsible for managing the waste in compliance with this paragraph once the used oil is transported ashore. The co-generators may decide among them which party will fulfill the requirements of this paragraph.

(iii) Diesel Fuel

Mixtures of used oil and diesel fuel mixed by the generator of the used oil for use in the generator's own vehicles are not subject to this rule once the used oil and diesel fuel have been mixed. Prior to mixing, the used oil fuel is subject to the requirements of this paragraph.

(iv) Farmers

Farmers who generate an average of 25 gallons per month or less of used oil from vehicles or machinery used on the farm in a calendar year are not subject to the requirements of this rule.

(Comment: Farmers meeting this exemption are presumed to be do-it-yourselfers.)

2. Other Applicable Provisions

Used oil generators who conduct the following activities are subject to the requirements of other applicable provisions of this rule as indicated in subparts (i) through (v) of this part:

(i) Generators who transport used oil, except under the self-transport provisions of parts (e)1 and 2 of this paragraph, must also comply with paragraph (5) of this rule.

(ii) Generators who process or re-refine used oil must also comply with paragraph (6) of this rule.

(I) Except as provided in item (II) of this subpart, generators who process or re-refine used oil must also comply with paragraph (6) of this rule.

(II) Generators who perform the following activities are not processors provided that the used oil is generated on-site and is not being sent off-site to a burner of on- or off-specification used oil fuel:

I. Filtering, cleaning, or otherwise reconditioning used oil before returning it for reuse by the generator;

II. Separating used oil from wastewater generated on-site to make the wastewater acceptable for discharge or reuse pursuant to the Tennessee Water Quality Control Act of 1977 or section 402 or section 307(b) of the Clean Water Act or other applicable Federal or state regulations governing the management or discharge of wastewaters;

III. Using oil mist collectors to remove small droplets of used oil from in-plant air to make plant air suitable for continued recirculation;

IV. Draining or otherwise removing used oil from materials containing or otherwise contaminated with used oil in order to remove excessive oil to the extent possible pursuant to part (2)(a)3 of this rule;

V. Filtering, separating, or otherwise reconditioning used oil before burning it in a space heater pursuant to subparagraph (d) of this paragraph.

(iii) Generators who burn off-specification used oil for energy recovery, except under the on-site space heater provisions of subparagraph (d) of this paragraph, must also comply with paragraph (7) of this rule.

(iv) Generators who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in subparagraph (2)(b) of this rule must also comply with paragraph (8) of this rule.

(v) Generators who dispose of used oil, including the use of used oil as a dust suppressant, must also comply with paragraph (9) of this rule.

(b) Hazardous Waste Mixing [40 CFR 279.21]

1. Mixtures of used oil and hazardous waste must be managed in accordance with Rule 0400-12-01-.11(2)(a)2.

2. The rebuttable presumption for used oil of item (2)(a)2(i)(II) of this rule applies to used oil

managed by generators. Under the rebuttable presumption for used oil of item (2)(a)2(i)(II) of this rule, used oil containing greater than 1,000 ppm total halogens is presumed to be a hazardous waste and thus must be managed as hazardous waste and not as used oil unless the presumption is rebutted. However, the rebuttable presumption does not apply to certain metalworking oils/fluids and certain used oils removed from refrigeration units.

(c) Used Oil Storage [40 CFR 279.22]

Used oil generators are subject to all applicable Spill Prevention, Control and Countermeasures [40 CFR part 112] in addition to the requirements of this paragraph. Used oil generators are also subject to the Underground Storage Tank standards (Rules 1200-01-15-.01 through .11) for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this paragraph.

1. Storage Units

Used oil generators shall not store used oil in units other than tanks, containers, or units subject to regulation under Rules 0400-12-01-.05 or .06.

2. Condition of Units

Containers and aboveground tanks used to store used oil at generator facilities must be:

(i) In good condition (no severe rusting, apparent structural defects or deterioration) and

(ii) Not leaking (no visible leaks).

3. Labels

(i) Containers and aboveground tanks used to store used oil at generator facilit must be labeled or marked clearly with the words "Used Oil."

(ii) Fill pipes used to transfer used oil into underground storage tanks at gene marked clearly with the words "Used Oil."

managed by generators. Under the rebuttable presumption for used oil of item (2)(a)2(i)(II) of this rule, used oil containing greater than 1,000 ppm total halogens is presumed to be a hazardous waste and thus must be managed as hazardous waste and not as used oil unless the presumption is rebutted. However, the rebuttable presumption does not apply to certain metalworking oils/fluids and certain used oils removed from refrigeration units.

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1. Storage Units

Used oil generators shall not store used oil in units other than tanks, containers, or units subject to regulation under Rules 0400-12-01-.05 or .06.

2. Condition of Units

Containers and aboveground tanks used to store used oil at generator facilities must be:

(i) In good condition (no severe rusting, apparent structural defects or deterioration); and

(ii) Not leaking (no visible leaks).

3. Labels

(i) Containers and aboveground tanks used to store used oil at generator facilities must be labeled or marked clearly with the words "Used Oil."

(ii) Fill pipes used to transfer used oil into underground storage tanks at generator facilities must be labeled or marked clearly with the words "Used Oil."

4. Response to Releases

Upon detection of a release of used oil to the environment that is not subject to the requirements of the Underground Storage Tank standards (Rules 1200-01-15-.01 through .11), and which occurred after July 1, 1993, the effective date of the used oil regulations in Tennessee, a generator must perform the following cleanup steps:

(i) Stop the release;

(ii) Contain the released used oil;

(iii) Clean up and manage properly the released used oil and other materials; and

(iv) If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

(d) On-site Burning in Space Heaters [40 CFR 279.23]

Generators may burn used oil in used oil-fired space heaters provided that:

1. The heater burns only used oil that the owner or operator generates or used oil received from household do-it-yourself used oil generators;

2. The heater is designed to have a maximum capacity of not more than 0.5 million Btu per

hour; and

3. The combustion gases from the heater are vented to the ambient air.

(e) Off-site Shipments [40 CFR 279.24]

Except as provided in parts 1 through 3 of this subparagraph, generators must ensure that their used oil is transported only by transporters who have obtained Installation Identification Numbers.

1. Self-transportation of Small Amounts to Approved Collection Centers

Generators may transport, without an Installation Identification Number, used oil that is generated at the generator's site and used oil collected from household do-it-yourselfers to a used oil collection center provided that:

(i) The generator transports the used oil in a vehicle owned by the generator or owned by an employee of the generator;

(ii) The generator transports no more than 55 gallons of used oil at any time; and

(iii) The generator transports the used oil to a used oil collection center that is registered, licensed, permitted, or recognized by a state/county/municipal government to manage used oil.

2. Self-transportation of Small Amounts to Aggregation Points Owned by the Generator

Generators may transport, without an Installation Identification Number, used oil that is generated at the generator's site to an aggregation point provided that:

(i) The generator transports the used oil in a vehicle owned by the generator or owned by an employee of the generator;

(ii) The generator transports no more than 55 gallons of used oil at any time; and

(iii) The generator transports the used oil to an aggregation point that is owned and/or operated by the same generator.

3. Tolling Arrangements

Used oil generators may arrange for used oil to be transported by a transporter without an Installation Identification Number if the used oil is reclaimed under a contractual agreement pursuant to which reclaimed oil is returned by the processor/re-refiner to the generator for use as a lubricant, cutting oil, or coolant. The contract (known as a "tolling arrangement") must indicate:

(i) The type of used oil and the frequency of shipments;

(ii) That the vehicle used to transport the used oil to the processing/re-refining facility and to deliver recycled used oil back to the generator is owned and operated by the used oil processor/re-refiner; and

(iii) That reclaimed oil will be returned to the generator.

(4) Standards for Used Oil Collection Centers and Aggregation Points [40 CFR 279 Subpart D]

(a) Do-it-Yourselfer Used Oil Collection Centers [40 CFR 279.30]

1. Applicability

This paragraph applies to owners or operators of all do-it-yourselfer (DIY) used oil collection centers. A DIY used oil collection center is any site or facility that

accepts/aggregates and stores used oil collected only from household do-it-yourselfers.

2. DIY Used Oil Collection Center Requirements

Owners or operators of all DIY used oil collection centers must comply with the generator standards in paragraph (3) of this rule.

(b) Used Oil Collection Centers [40 CFR 279.31]

1. Applicability

This subparagraph applies to owners or operators of used oil collection centers. A used oil collection center is any site or facility that accepts/aggregates and stores used oil collected from used oil generators regulated under paragraph (3) of this rule who bring used oil to the collection center in shipments of no more than 55 gallons under the provisions of part (3)(e)1 of this rule. Used oil collection centers may also accept used oil from household do-it-yourselfers.

2. Used Oil Collection Center Requirements

Owners or operators of all used oil collection centers must:

(i) Comply with the generator standards in paragraph (3) of this rule; and

(ii) Be registered/ licensed/ permitted/ recognized by a state/ county/ municipal government to manage used oil.

(c) Used Oil Aggregation Points Owned by the Generator [40 CFR 279.32]

1. Applicability

This subparagraph applies to owners or operators of all used oil aggregation points. A used oil aggregation point is any site or facility that accepts, aggregates, and/or stores used oil collected only from other used oil generation sites owned or operated by the owner or operator of the aggregation point, from which used oil is transported to the aggregation point in shipments of no more than 55 gallons under the provisions of part (3)(e)2 of this rule. Used oil aggregation points may also accept used oil from household do-it-yourselfers.

2. Used Oil Aggregation Point Requirements

Owners or operators of all used oil aggregation points must comply with the generator standards in paragraph (3) of this rule.

(5) Standards for Used Oil Transporter and Transfer Facilities

(a) Applicability [40 CFR 279.40]

1. General

Except as provided in subparts (i) through (iv) of this part, this paragraph applies to all used oil transporters. Used oil transporters are persons who transport used oil, persons who collect used oil from more than one generator and transport the collected oil, and owners and operators of used oil transfer facilities.

(i) This paragraph does not apply to on-site transportation.

(ii) This paragraph does not apply to generators who transport shipments of used oil totaling 55 gallons or less from the generator to a used oil collection center as specified in part (3)(e)1 of this rule, except as provided for in subpart (v) of this part.

(iii) This paragraph does not apply to generators who transport shipments of used oil totaling 55 gallons or less from the generator to a used oil aggregation point owned or operated by the same generator as specified in part (3)(e)2 of this rule, except as provided for in subpart (v) of this part.

(iv) This paragraph does not apply to transportation of used oil from household do-it-yourselfers to a regulated used oil generator, collection center, aggregation point, processor/re-refiner, or burner subject to the requirements of this part. Except as provided in subparts (i) through (iii) of this part, this paragraph does, however, apply to transportation of collected household do-it-yourselfer used oil from regulated used oil generators, collection centers, aggregation points, or other facilities where household do-it-yourselfer used oil is collected.

(v) Any transporter of used oil who transports: a) quantities of used oil in excess of 55 gallons of used oil at any given time, or b) who transports more than 1,000 gallons of used oil in a calendar year, must meet the certification requirements of this subparagraph in order to transport used oil in the state of Tennessee. Certification of compliance with the following items must be demonstrated prior to commencement of used oil transportation activities by the transporter, as well as annually, as part of the used oil transporter's annual report.

(I) Each used oil hauler must demonstrate that each employee engaged in the hauling of used oil is in the possession of a current Commercial Driver's License. This must be accompanied by a signed certification by the employee stating that the employee has examined and is familiar with the Used Oil Management Standards for Transporters in Tennessee Rule 0400-12-01-.11.

(II) All vehicles used to transport used oil shall have Periodic Inspections as described by Tennessee Code Annotated §65-15-113 and Rule 1220-02-01-.20. The requirements of a Periodic Inspection are found in federal regulations at 49 CFR Parts 396.17 through 396.25, and Appendix G of 49 CFR Part 396. A copy of the Periodic Inspection report for each vehicle engaged in the transport of used oil shall be included in the initial Certification and updated in subsequent annual reports. Each vehicle shall be in good mechanical condition and suitable for the transportation of used oil.

(III) All commercial transporters engaged in the transportation of used oils must maintain a minimum of $1,000,000 in liability insurance.

(IV) The transporter shall briefly describe the recordkeeping practices to demonstrate compliance with subparagraph (g) of this paragraph. Copies (examples only) of shipping papers shall be included.

(V) I. The transporter shall certify that all used oil is delivered to qualified customers or certified recyclers.

II. A. The terms "qualified customers" and "certified recyclers" shall mean transporters, transfer facilities, off-specification burners, reprocessors, marketers, and/or re-refiners of used oil, which are in possession of valid Installation Identification Numbers.

B. "Qualified customers" shall also include customers without Installation Identification Numbers which receive and burn only those used oils which qualify as "on-specification" used oils as defined in subparagraph (2)(b) of this rule. In such cases when the qualified customer receives a shipment of on-specification used

oil and does not possess an Installation Identification Number, the transporter shall clearly indicate in the record that the shipment was "on-specification" used oil.

III. A. Supporting documentation of compliance with subitems I and II of this item shall include all information as required at part (g)2 of this paragraph.

B. This documentation shall be constructed and maintained in accordance with the recordkeeping requirements of subparagraph (g) of this paragraph, and shall be available for inspection and furnished to the Department upon request.

(vi) (I) Certifications required by this paragraph, except for "drivers" identified in item (v)(I) of this part, shall contain the following wording:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance to a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that knowingly giving or causing to be given any false information constitutes a Class C misdemeanor."

(II) The Certification for "drivers" referred to in item (v)(I) of this part shall contain the following wording:

"I certify that I have read and am familiar with the Used Oil Management Standards for Transporters in Rule 0400-12-01-.11. I am aware that knowingly giving or causing to be given any false information constitutes a Class C misdemeanor."

2. Imports and Exports

Transporters who import used oil from abroad or export used oil outside of the United States are subject to the requirements of this paragraph from the time the used oil enters and until the time it exits the United States.

3. Trucks Used to Transport Hazardous Waste

Unless trucks previously used to transport hazardous waste are emptied as described in Rule 0400-12-01-.02(1)(g) prior to transporting used oil, the used oil is considered to have been mixed with the hazardous waste and must be managed as hazardous waste unless, under the provisions of part (2)(a)2 of this rule, the hazardous waste/used oil mixture is determined not to be hazardous waste.

4. Other Applicable Provisions

Used oil transporters who conduct the following activities are also subject to other applicable provisions of this rule as indicated in subparts (i) through (v) of this part:

(i) Transporters who generate used oil must also comply with paragraph (3) of this rule;

(ii) Transporters who process or re-refine used oil, except as provided in subparagraph (b) of this paragraph, must also comply with paragraph (6) of this rule;

(iii) Transporters who burn off-specification used oil for energy recovery must also comply with paragraph (7) of this rule;

(iv) Transporters who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in subparagraph (2)(b) of this rule must also comply with paragraph (8) of this rule; and

(v) Transporters who dispose of used oil, including the use of used oil as a dust suppressant, must also comply with paragraph (9) of this rule.

(b) Restrictions on Transporters Who Are Not Also Processors or Re-refiners [40 CFR 279.41]

1. Used oil transporters may consolidate or aggregate loads of used oil for purposes of transportation. However, except as provided in part 2 of this subparagraph, used oil transporters may not process used oil unless they also comply with the requirements for processors/re-refiners in paragraph (6) of this rule.

2. Transporters may conduct incidental processing operations that occur in the normal course of used oil transportation (e.g., settling and water separation), but that are not designed to produce (or make more amenable for production of) used oil derived products unless they also comply with the processor/re-refiner requirements in paragraph (6) of this rule.

3. Transporters of used oil that is removed from oil bearing electrical transformers and turbines and filtered by the transporter or at a transfer facility prior to being returned to its original use are not subject to the processor/re-refiner requirements in paragraph (6) of this rule.

(c) Notification [40 CFR 279.42]

1. Identification Numbers

Used oil transporters who have not previously complied with the notification requirements of Rule 0400-12-01-.03(2) must comply with these requirements and obtain an Installation Identification Number.

2. Mechanics of Notification

A used oil transporter who has not received an Installation Identification Number may obtain one by notifying the Commissioner of their used oil activity by submitting either:

(i) A completed Solid Waste Management Notification, and Solid Waste Management Notification Schedule B and Hazardous Waste Notification forms; or

(Note: To obtain the forms call Tennessee Department of Environment and Conservation, Division of Solid Waste Management (800) 237-7018.)

(ii) A letter requesting an Installation Identification Number.

Call the Tennessee Department of Environment and Conservation, Division of Solid Waste Management, Used Oil Management Program at (800) 237-7018 to determine where to send a letter requesting an Installation Identification Number. The letter should include the following information:

(I) Transporter company name;

(II) Owner of the transporter company;

(III) Mailing address for the transporter;

(IV) Name and telephone number for the transporter point of contact;

(V) Type of transport activity (i.e., transport only, transport and transfer facility, transfer facility only);

(VI) Location of all transfer facilities at which used oil is stored;

(VII) Name and telephone number for a contact at each transfer facility.

(d) Used Oil Transportation [40 CFR 279.43]

1. Deliveries

A used oil transporter must deliver all used oil received to:

(i) Another used oil transporter, provided that the transporter has obtained an Installation Identification Number;

(ii) A used oil processing/re-refining facility who has obtained an Installation Identification Number;

(iii) An off-specification used oil burner facility who has obtained an Installation Identification Number; or

(iv) An on-specification used oil burner facility.

2. DOT Requirements

Used oil transporters must comply with all applicable requirements under the U.S. Department of Transportation regulations in 49 CFR parts 171 through 180. Persons transporting used oil that meets the definition of a hazardous material in 49 CFR 171.8 must comply with all applicable regulations in 49 CFR parts 171 through 180.

3. Used Oil Discharges.

(i) In the event of a discharge of used oil during transportation, the transporter must take appropriate immediate action to protect human health and the environment (e.g., notify local authorities, dike the discharge area).

(ii) If a discharge of used oil occurs during transportation and an official (State or local government or a Federal Agency) acting within the scope of official responsibilities determines that immediate removal of the used oil is necessary to protect human health or the environment, that official may authorize the removal of the used oil by transporters who do not have Installation Identification Numbers.

(iii) An air, rail, highway, or water transporter who has discharged used oil must:

(I) Give notice, if required by 49 CFR 171.15, to the National Response Center (800-424-8802 or 202-426-2675); and

(II) Report in writing as required by 49 CFR 171.16 to the Director, Office of Hazardous Materials Regulations, Materials Transportation Bureau, Department of Transportation, Washington, DC 20590.

(iv) A water transporter who has discharged used oil must give notice as required by 33 CFR 153.203.

(v) A transporter must clean up any used oil discharge that occurs during transportation or take such action as may be required or approved by federal,

state, or local officials so that the used oil discharge no longer presents a hazard to human health or the environment.

(e) Rebuttable Presumption For Used Oil [40 CFR 279.44]

1. To ensure that used oil is not a hazardous waste under the rebuttable presumption of item (2)(a)2(i)(II) of this rule, the used oil transporter must determine whether the total halogen content of used oil being transported or stored at a transfer facility is above or below 1,000 ppm.

2. The transporter must make this determination by:

   (i) Testing the used oil; or

   (ii) Applying knowledge of the halogen content of the used oil in light of the materials or processes used.

3. If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in Rule 0400-12-01-.02(4). The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Rule 0400-12-01-.02(5) Appendix VIII).

   (i) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement as described in part (3)(e)3 of this rule, to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.

   (ii) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units if the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

4. Record Retention

   Records of analyses conducted or information used to comply with parts 1, 2 and 3 of this subparagraph must be maintained by the transporter for at least 3 years.

(f) Used Oil Storage at Transfer Facilities [40 CFR 279.45]

Used oil transporters are subject to all applicable Spill Prevention, Control and Countermeasures (40 CFR part 112) in addition to the requirements of this paragraph. Used oil transporters are also subject to the Underground Storage Tank standards (Rules 0400-18-01-.01 through .11) for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this paragraph.

1. Applicability

   This subparagraph applies to used oil transfer facilities. Used oil transfer facilities are transportation related facilities including loading docks, parking areas, storage areas, and other areas where shipments of used oil are held for more than 24 hours during the normal course of transportation and not longer than 35 days. Transfer facilities that store used oil for more than 35 days are subject to regulation under paragraph (6) of this rule.

2. Storage Units

   Owners or operators of used oil transfer facilities may not store used oil in units other than tanks, containers, or units subject to regulation under Rules 0400-12-01-.05 or .06.

3. Condition of Units

Containers and aboveground tanks used to store used oil at transfer facilities must be:

(i) In good condition (no severe rusting, apparent structural defects or deterioration); and

(ii) Not leaking (no visible leaks).

4. Secondary Containment for Containers

Containers used to store used oil at transfer facilities must be equipped with a secondary containment system.

(i) The secondary containment system must consist of, at a minimum:

(I) Dikes, berms or retaining walls; and

(II) A floor. The floor must cover the entire area within the dikes, berms, or retaining walls; or

(III) An equivalent secondary containment system.

(ii) The entire containment system, including walls and floors, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

5. Secondary Containment for Existing Aboveground Tanks

Existing aboveground tanks used to store used oil at transfer facilities must be equipped with a secondary containment system.

(i) The secondary containment system must consist of, at a minimum:

(I) Dikes, berms or retaining walls; and

(II) A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or

(III) An equivalent secondary containment system.

(ii) The entire containment system, including walls and floors, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

6. Secondary Containment for New Aboveground Tanks

New aboveground tanks used to store used oil at transfer facilities must be equipped with a secondary containment system.

(i) The secondary containment system must consist of, at a minimum:

(I) Dikes, berms or retaining walls; and

(II) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or

(III) An equivalent secondary containment system.

(ii) The entire containment system, including walls and floors, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

7. Labels

(i) Containers and aboveground tanks used to store used oil at transfer facilities must be labeled or marked clearly with the words "Used Oil."

(ii) Fill pipes used to transfer used oil into underground storage tanks at transfer facilities must be labeled or marked clearly with the words "Used Oil." Where fill pipes are visually separated from the tanks (e.g., by a wall or other obstruction), the fill pipes must be labeled on both sides of the obstruction.

8. Response to Releases

Upon detection of a release of used oil to the environment that is not subject to the requirements of the Underground Storage Tank standards (Rules 1200-01-15-.01 through .11), and which occurred after July 1, 1993, the effective date of the used oil regulations in Tennessee, the owner/operator of a transfer facility must perform the following cleanup steps:

(i) Stop the release;

(ii) Contain the released used oil;

(iii) Clean up and manage properly the released used oil and other materials; and

(iv) If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

(g) Tracking [40 CFR 279.46]

1. Acceptance

Used oil transporters must keep a record of each used oil shipment accepted for transport. Records for each shipment must include:

(i) The name and address of the generator, transporter, or processor/re-refiner who provided the used oil for transport;

(ii) The Installation Identification Number (if applicable) of the generator, transporter, or processor/re-refiner who provided the used oil for transport;

(iii) The quantity of used oil accepted;

(iv) The date of acceptance; and

(v) The signature, dated upon receipt of the used oil, of a representative of the generator, transporter, or processor/re-refiner who provided the used oil for transport.

(I) Except as provided in item (II) of this subpart, the signature, dated upon receipt of the used oil, of a representative of the generator, transporter, or processor/re-refiner who provided the used oil for transport.

(II) Intermediate rail transporters are not required to sign the record of acceptance.

2. Deliveries

Used oil transporters must keep a record of each shipment of used oil that is delivered to another used oil transporter, or to a used oil burner, processor/re-refiner, or disposal facility. Records of each delivery must include:

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

(ii) The Installation Identification Number of the receiving facility or transporter;

(iii) The quantity of used oil delivered;

(iv) The date of delivery;

(v) The signature, dated upon receipt of the used oil, of a representative of the receiving facility or transporter.

(I) Except as provided in item (II) of this subpart, the signature, dated upon receipt of the used oil, of a representative of the receiving facility or transporter.

(II) Intermediate rail transporters are not required to sign the record of delivery.

3. Exports of Used Oil

Used oil transporters must maintain the records described in subparts 2(i) through (iv) of this subparagraph for each shipment of used oil exported to any foreign country.

4. Record Retention

The records described in parts 1, 2, and 3 of this subparagraph must be maintained for at least three years.

(h) Management of Residues [40 CFR 279.47]

Transporters who generate residues from the storage or transport of used oil must manage the residues as specified in part (2)(a)5 of this rule.

(6) Standards for Used Oil Processors and Re-Refiners [40 CFR 279 Subpart F]

(a) Applicability [40 CFR 279.50]

1. The requirements of this paragraph apply to owners and operators of facilities that process used oil. Processing means chemical or physical operations designed to produce from used oil, or to make used oil more amenable for production of, fuel oils, lubricants, or other used oil-derived products. Processing includes, but is not limited to: blending used oil with virgin petroleum products, blending used oils to meet the fuel specification, filtration, simple distillation, chemical or physical separation and re-refining. The requirements of this paragraph do not apply to:

(i) Transporters that conduct incidental processing operations that occur during the normal course of transportation as provided in subparagraph (5)(b) of this rule; or

(ii) Burners that conduct incidental processing operations that occur during the normal course of used oil management prior to burning as provided in part (7)(b)2 of this rule.

2. Other Applicable Provisions

Used oil processors/re-refiners who conduct the following activities are also subject to the requirements of other applicable provisions of this rule as indicated in subparts (i) through (v) of this part.

(i) Processors/re-refiners who generate used oil must also comply with paragraph (3) of this rule;

(ii) Processors/re-refiners who transport used oil must also comply with paragraph (5) of this rule;

(iii) Except as provided in items (I) and (II) of this subpart, processors/re-refiners who burn off-specification used oil for energy recovery must also comply with paragraph (7) of this rule. Processor/re-refiners burning used oil for energy recovery under the following conditions are not subject to paragraph (7) of this rule:

(I) The used oil is burned in an on-site space heater that meets the requirements of subparagraph (3)(d) of this rule; or

(II) The used oil is burned for purposes of processing used oil, which is considered burning incidentally to used oil processing;

(iv) Processors/re-refiners who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in subparagraph (2)(b) of this rule must also comply with paragraph (8) of this rule; and

(v) Processors/re-refiners who dispose of used oil, including the use of used oil as a dust suppressant, also must comply with paragraph (9) of this rule.

(b) Notification [40 CFR 279.51]

1. Identification Numbers

Used oil processors and re-refiners who have not previously complied with the notification requirements of Rule 0400-12-01-.03(2) must comply with these requirements and obtain an Installation Identification Number.

2. Mechanics of Notification

A used oil processor or re-refiner who has not received an Installation Identification Number may obtain one by notifying the Commissioner of their used oil activity by submitting either:

(i) A completed Solid Waste Management Notification and Hazardous Waste Notification Forms; or

(Note: To obtain the forms call Tennessee Department of Environment and Conservation, Division of Solid Waste Management (800) 237-7018.)

(ii) A letter requesting an Installation Identification Number.

Call the Tennessee Department of Environment and Conservation, Division of Solid Waste Management, Used Oil Management Program at (800) 237-7018 to determine where to send a letter requesting an Installation Identification Number. The letter should include the following information:

(I) Processor or re-refiner company name;

(II) Owner of the processor or re-refiner company;

(III) Mailing address for the processor or re-refiner;

(IV) Name and telephone number for the processor or re-refiner point of contact;

(V) Type of used oil activity (i.e., process only, process and re-refine);

(VI) Location of the processor or re-refiner facility.

(c) General Facility Standards [40 CFR 279.52]

1. Preparedness and Prevention

Owners and operators of used oil processing and re-refining facilities must comply with the following requirements:

(i) Maintenance and Operation of Facility

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

(ii) Required Equipment

All facilities must be equipped with the following, unless none of the hazards posed by used oil handled at the facility could require a particular kind of equipment specified in items (I) through (IV) of this subpart:

(I) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;

(II) A device, such as a telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or State or local emergency response teams;

(III) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment and decontamination equipment; and

(IV) Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems.

(iii) Testing and Maintenance of Equipment

All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.

(iv) Access to Communications or Alarm System

(I) Whenever used oil is being poured, mixed, spread, or otherwise handled, all personnel involved in the operation must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in subpart (ii) of this part.

(II) If there is ever just one employee on the premises while the facility is

operating, the employee must have immediate access to a device, such as a telephone (immediately available at the scene of operation) or a hand-held two-way radio, capable of summoning external emergency assistance, unless such a device is not required in subpart (ii) of this part.

(v) Required Aisle Space

The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless aisle space is not needed for any of these purposes.

(vi) Arrangements With Local Authorities

(I) The owner or operator must attempt to make the following arrangements, as appropriate for the type of used oil handled at the facility and the potential need for the services of these organizations:

I. Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of used oil handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes;

II. Where more than one police and fire department might respond to an emergency, agreements designating primary emergency authority to a specific police and a specific fire department, and agreements with any others to provide support to the primary emergency authority;

III. Agreements with State emergency response teams, emergency response contractors, and equipment suppliers; and

IV. Arrangements to familiarize local hospitals with the properties of used oil handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility.

(II) Where State or local authorities decline to enter into such arrangements, the owner or operator must document the refusal in the operating record.

2. Contingency Plan and Emergency Procedures

Owners and operators of used oil processing and re-refining facilities must comply with the following requirements:

(i) Purpose and Implementation of Contingency Plan

(I) Each owner or operator must have a contingency plan for the facility. The contingency plan must be designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of used oil to air, soil, or surface water.

(II) The provisions of the plan must be carried out immediately whenever there is a fire, explosion, or release of used oil which could threaten human health or the environment.

(ii) Content of Contingency Plan

(I) The contingency plan must describe the actions facility personnel must take to comply with subparts (i) and (vi) of this part in response to fires, explosions, or any unplanned sudden or non-sudden release of used oil to air, soil, or surface water at the facility.

(II) If the owner or operator has already prepared a Spill Prevention, Control, and Countermeasures (SPCC) Plan in accordance with federal 40 CFR 112, or 40 CFR 1510, or some other emergency or contingency plan, the owner or operator need only amend that plan to incorporate used oil management provisions that are sufficient to comply with the requirements of this rule.

(III) The plan must describe arrangements agreed to by local police departments, fire departments, hospitals, contractors, and State and local emergency response teams to coordinate emergency services, pursuant to subpart 1(vi) of this subparagraph.

(IV) The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator (see subpart (v) of this part), and this list must be kept up to date. Where more than one person is listed, one must be named as primary emergency coordinator and others must be listed in the order in which they will assume responsibility as alternates.

(V) The plan must include a list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.

(VI) The plan must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of used oil or fires).

(iii) Copies of Contingency Plan

A copy of the contingency plan and all revisions to the plan must be:

(I) Maintained at the facility; and

(II) Submitted to all local police departments, fire departments, hospitals, and State and local emergency response teams that may be called upon to provide emergency services.

(iv) Amendment of Contingency Plan

The contingency plan must be reviewed, and immediately amended, if necessary, whenever:

(I) Applicable regulations are revised;

(II) The plan fails in an emergency;

(III) The facility changes-in its design, construction, operation, maintenance, or other circumstances-in a way that materially increases the potential for fires, explosions, or releases of used oil, or changes the response necessary in an emergency;

(IV) The list of emergency coordinators changes; or

(V) The list of emergency equipment changes.

(v) Emergency Coordinator

At all times, there must be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period of time) with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristic of used oil handled, the location of all records within the facility, and facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

(Guidance: The emergency coordinator's responsibilities are more fully spelled out in subpart (vi) of this part. Applicable responsibilities for the emergency coordinator vary, depending on factors such as type and variety of used oil handled by the facility, and type and complexity of the facility.)

(vi) Emergency Procedures

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

I. Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

II. Notify appropriate State or local agencies with designated response roles if their help is needed.

(II) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials. He may do this by observation or review of facility records or manifests and, if necessary, by chemical analyses.

(III) Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-offs from water or chemical agents used to control fire and heat-induced explosions).

(IV) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he must report his findings as follows:

I. If his assessment indicated that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated; and

II. He must immediately notify either the government official designated as the on-scene coordinator for the geographical area (in the applicable regional contingency plan under federal 40 CFR 1510), the Tennessee Emergency Management Agency

(TEMA) (using their 24-hour toll free number 800/262-3300 or 3400) or the National Response Center (using their 24-hour toll free number 800/424-8802). The report must include:

A. Name and telephone number of reporter;

B. Name and address of facility;

C. Time and type of incident (e.g., release, fire);

D. Name and quantity of material(s) involved, to the extent known;

E. The extent of injuries, if any; and

F. The possible hazards to human health, or the environment, outside the facility.

(V) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other used oil or hazardous waste at the facility. These measures must include, where applicable, stopping processes and operation, collecting and containing released used oil, and removing or isolating containers.

(VI) If the facility stops operation in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

(VII) Immediately after an emergency, the emergency coordinator must provide for recycling, storing, or disposing of recovered used oil, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

(VIII) The emergency coordinator must ensure that, in the affected area(s) of the facility:

I. No waste or used oil that may be incompatible with the released material is recycled, treated, stored, or disposed of until cleanup procedures are completed; and

II. All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

III. The owner or operator must notify the Commissioner, and appropriate State and local authorities, that the facility is in compliance with subitems I and II of this item before operations are resumed in the affected area(s) of the facility.

(IX) The owner or operator must note in the operating record the time, date and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he must submit a written report on the incident to the Commissioner. The report must include:

I. Name, address, and telephone number of the owner or operator;

II. Name, address, and telephone number of the facility;

III. Date, time, and type of incident (e.g., fire, explosion);

IV. Name and quantity of material(s) involved;

V. The extent of injuries, if any;

VI. An assessment of actual or potential hazards to human health or the environment, where this is applicable;

VII. Estimated quantity and disposition of recovered material that resulted from the incident.

(d) Rebuttable Presumption for Used Oil [40 CFR 279.53]

1. To ensure that used oil managed at a processing/re-refining facility is not hazardous waste under the rebuttable presumption of item (2)(a)2(i)(II) of this rule, the owner or operator of a used oil processing/re-refining facility must determine whether the total halogen content of used oil managed at the facility is above or below 1,000 ppm.

2. The owner or operator must make this determination by:

(i) Testing the used oil; or

(ii) Applying knowledge of the halogen content of the used oil in light of the materials or processes used.

3. If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in Rule 0400-12-01-.02(4). The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Rule 0400-12-01-.02(5)(a) Appendix VIII).

(i) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling agreement, to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.

(ii) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

(e) Used Oil Management [40 CFR 279.54]

Used oil processor/re-refiners are subject to all applicable Spill Prevention, Control and Countermeasures (40 CFR part 112) in addition to the requirements of this paragraph. Used oil processors/re-refiners are also subject to the Underground Storage Tank standards (Rules 1200-01-15-.01 through .11) for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this paragraph.

1. Management Units

Used oil processors/re-refiners may not store used oil in units other than tanks, containers, or units subject to regulation under Rule 0400-12-01-.05 or .06.

2. Condition of Units

Containers and aboveground tanks used to store or process used oil at processing and re-refining facilities must be:

(i) In good condition (no severe rusting, apparent structural defects or deterioration); and

(ii) Not leaking (no visible leaks).

3. Secondary Containment for Containers

Containers used to store or process used oil at processing and re-refining facilities must be equipped with a secondary containment system.

(i) The secondary containment system must consist of, at a minimum:

(I) Dikes, berms or retaining walls; and

(II) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or

(III) An equivalent secondary containment system.

(ii) The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

4. Secondary Containment for Existing Aboveground Tanks

Existing aboveground tanks used to store or process used oil at processing and re-refining facilities must be equipped with a secondary containment system.

(i) The secondary containment system must consist of, at a minimum:

(I) Dikes, berms or retaining walls; and

(II) A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or

(III) An equivalent secondary containment system.

(ii) The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

5. Secondary Containment for New Aboveground Tanks

New aboveground tanks used to store or process used oil at processing and re-refining facilities must be equipped with a secondary containment system.

(i) The secondary containment system must consist of, at a minimum:

(I) Dikes, berms or retaining walls; and

(II) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or

(III) An equivalent secondary containment system.

(ii) The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface

water.

6. Labels

(i) Containers and aboveground tanks used to store or process used oil at processing and re-refining facilities must be labeled or marked clearly with the words "Used Oil."

(ii) Fill pipes used to transfer used oil into underground storage tanks at transfer facilities must be labeled or marked clearly with the words "Used Oil." Where fill pipes are visually separated from the tanks (e.g., by a wall or other obstruction), the fill pipes must be labeled on both sides of the obstruction.

7. Response to Releases

Upon detection of a release of used oil to the environment that is not subject to the requirements of the Underground Storage Tank standards (Rules 1200-01-15-.01 through .11), and which occurred after July 1, 1993, the effective date of the used oil regulations in Tennessee, an owner/operator must perform the following cleanup steps:

(i) Stop the release;

(ii) Contain the released used oil;

(iii) Clean up and manage properly the released used oil and other materials; and

(iv) If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

8. Closure

(i) Aboveground Tanks

Owners and operators who store or process used oil in aboveground tanks must comply with the following requirements:

(I) At closure of a tank system, the owner or operator must remove or decontaminate used oil residues in tanks, contaminated containment system components, contaminated soils, and structures and equipment contaminated with used oil, and manage them as hazardous waste, unless the materials are not hazardous waste under this rule.

(II) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in item (I) of this subpart, then the owner or operator must close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to hazardous waste landfills (Rule 0400-12-01-.05(14)(k)).

(ii) Containers

Owners and operators who store used oil in containers must comply with the following requirements:

(I) At closure, containers holding used oils or residues of used oil must be removed from the site;

(II) The owner or operator must remove or decontaminate used oil residues, contaminated containment system components, contaminated soils, and structures and equipment contaminated with used oil, and manage them as hazardous waste, unless the materials are not hazardous waste

under Rule 0400-12-01-.02.

(f) Analysis Plan [40 CFR 279.55]

Owners or operators of used oil processing and re-refining facilities must develop and follow a written analysis plan describing the procedures that will be used to comply with the analysis requirements of subparagraph (d) of this paragraph and, if applicable, subparagraph (8)(c) of this rule. The owner or operator must keep the plan at the facility.

1. Rebuttable Presumption for Used Oil in Subparagraph (d) of this Paragraph

At a minimum, the plan must specify the following:

(i) Whether sample analyses or knowledge of the halogen content of the used oil will be used to make this determination.

(ii) If sample analyses are used to make this determination:

(I) The sampling method used to obtain representative samples to be analyzed. A representative sample may be obtained using either:

I. One of the sampling methods in Appendix I of Rule 0400-12-01-.02; or

II. A method shown to be equivalent under Rules 0400-12-01-.01(3)(a) and (b);

(II) The frequency of sampling to be performed, and whether the analysis will be performed on-site or off-site; and

(III) The methods used to analyze used oil for the parameters specified in subparagraph (d) of this paragraph; and

(iii) The type of information that will be used to determine the halogen content of the used oil.

2. On-specification Used Oil Fuel in Subparagraph (8)(c) of this rule

At a minimum, the plan must specify the following if subparagraph (8)(c) of this rule is applicable:

(i) Whether sample analyses or other information will be used to make this determination;

(ii) If sample analyses are used to make this determination:

(I) The sampling method used to obtain representative samples to be analyzed. A representative sample may be obtained using either:

I. One of the sampling methods in Rule 0400-12-01-.02 Appendix I; or

II. A method shown to be equivalent under Rule 0400-12-01-.01(3)(a) and (b);

(II) Whether used oil will be sampled and analyzed prior to or after any processing/re-refining;

(III) The frequency of sampling to be performed, and whether the analysis will be performed on-site or off-site; and

(IV) The methods used to analyze used oil for the parameters specified in subparagraph (8)(c) of this rule; and

(iii) The type of information that will be used to make the on-specification used oil fuel determination.

(g) Tracking [40 CFR 279.56]

1. Acceptance

Used oil processors/re-refiners must keep a record of each used oil shipment accepted for processing/re-refining. These records may take the form of a log, invoice, manifest, bill of lading or other shipping documents. Records for each shipment must include the following information:

(i) The name and address of the transporter who delivered the used oil to the processor/re-refiner;

(ii) The name and address of the generator or processor/re-refiner from whom the used oil was sent for processing/re-refining;

(iii) The Installation Identification Number of the transporter who delivered the used oil to the processor/re-refiner;

(iv) The Installation Identification Number (if applicable) of the generator or processor/re-refiner from whom the used oil was sent for processing/re-refining;

(v) The quantity of used oil accepted; and

(vi) The date of acceptance.

2. Delivery

Used oil processor/re-refiners must keep a record of each shipment of used oil that is shipped to a used oil burner, processor/re-refiner, or disposal facility. These records may take the form of a log, invoice, manifest, bill of lading or other shipping documents. Records for each shipment must include the following information:

(i) The name and address of the transporter who delivers the used oil to the burner, processor/re-refiner or disposal facility;

(ii) The name and address of the burner, processor/re-refiner or disposal facility who will receive the used oil;

(iii) The Installation Identification Number of the transporter who delivers the used oil to the burner, processor/re-refiner or disposal facility;

(iv) The Installation Identification Number of the burner, processor/re-refiner, or disposal facility who will receive the used oil;

(v) The quantity of used oil shipped; and

(vi) The date of shipment.

3. Record Retention

The records described in part (6)(g)1 and 2 of this rule must be maintained for at least three years.

(h) Operating Record and Reporting

1. Operating Record [40 CFR 279.57(a)]

(i) The owner or operator must keep a written operating record at the facility.

(ii) The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility;

(I) Records and results of used oil analyses performed as described in the analysis plan required under subparagraph (f) of this paragraph; and

(II) Summary reports and details of all incidents that require implementation of the contingency plan as specified in part (c)2 of this paragraph.

2. Annual Report

A used oil processor/re-refiner and/or hauler/transporter must prepare and submit a single copy of an annual report to the Commissioner by March 1 of each year. Such reports must be submitted on forms provided by the Department and in accordance with the instructions accompanying the form. The annual report must cover activities during the previous calendar year and must include the following information:

(i) The Installation Identification Number (issued by the Department or EPA), name, and address of the processor/re-refiner and/or hauler/transporter;

(ii) The calendar year covered by the report;

(iii) Other information requested by the Department, including but not limited to the following:

(I) For a Processor/Re-refiner, the quantities of used oil accepted for processing/re-refining and the manner in which the used oil is processed/re-refined, including the specific processes employed; and

(II) For a hauler/transporter, the type and quantity of used oil transported, collected and recycled; and

(iv) The certification signed by the owner or operator or his authorized representative.

(i) Off-site Shipments of Used Oil [40 CFR 279.58]

Used oil processors/re-refiners who initiate shipments of used oil off-site must ship the used oil using a used oil transporter who has obtained an Installation Identification Number.

(j) Management of Residues [40 CFR 279.59]

Owners and operators who generate residues from the storage, processing, or re-refining of used oil must manage the residues as specified in part (2)(a)5 of this rule.

(7) Standards for Used Oil Burners Who Burn Off-Specification Used Oil for Energy Recovery [40 CFR 279 Subpart G]

(a) Applicability [40 CFR 279.60]

1. General

The requirements of this paragraph apply to used oil burners except as specified in subparts (i) and (ii) of this part. A used oil burner is a facility where used oil not meeting the specification requirements in subparagraph (2)(b) of this rule is burned for energy recovery in devices identified in part (b)1 of this paragraph. Facilities burning used oil for energy recovery under the following conditions are not subject to this paragraph:

(i) The used oil is burned by the generator in an on-site space heater under the provisions of subparagraph (3)(d) of this rule; or

(ii) The used oil is burned by a processor/re-refiner for purposes of processing used oil, which is considered burning incidentally to used oil processing.

2. Other Applicable Provisions

Used oil burners who conduct the following activities are also subject to the requirements of other applicable provisions of this rule as indicated below.

(i) Burners who generate used oil must also comply with paragraph (3) of this rule;

(ii) Burners who transport used oil must also comply with paragraph (5) of this rule;

(iii) Except as provided in part (b)2 of this paragraph, burners who process or re-refine used oil must also comply with paragraph (6) of this rule;

(iv) Burners who direct shipments of off-specification used oil from their facility to a used oil burner or first claim that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in subparagraph (2)(b) of this rule must also comply with paragraph (8) of this rule; and

(v) Burners who dispose of used oil, including the use of used oil as a dust suppressant, must comply with paragraph (9) of this rule.

3. Specification Fuel

This paragraph does not apply to persons burning used oil that meets the used oil fuel specification of subparagraph (2)(b) of this rule, provided that the burner complies with the requirements of paragraph (8) of this rule.

(b) Restrictions on Burning [40 CFR 279.61]

1. Off-specification used oil fuel may be burned for energy recovery in only the following devices:

(i) Industrial furnaces identified in Rule 0400-12-01-.01(2)(a);

(ii) Boilers, as defined in Rule 0400-12-01-.01(2)(a) that are identified as follows:

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

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

(III) Used oil-fired space heaters provided that the burner meets the provisions of subparagraph (3)(d) of this rule; or

(iii) Hazardous waste incinerators subject to regulation under Rule 0400-12-01-.05(15) or .06(15).

2. (i) With the following exception, used oil burners may not process used oil unless they also comply with the requirements of paragraph (6) of this rule.

(ii) Used oil burners may aggregate off-specification used oil with virgin oil or on-specification used oil for purposes of burning, but may not aggregate for

purposes of producing on-specification used oil.

(c) Notification [40 CFR 279.62]

1. Identification Numbers

Used oil burners which have not previously complied with the notification requirements of Rule 0400-12-01-.03(2) must comply with these requirements and obtain an Installation Identification Number.

2. Mechanics of Notification

A used oil burner who has not received an Installation Identification Number may obtain one by notifying the Commissioner of their used oil activity by submitting either:

(i) A completed Solid Waste Management Notification, Solid Waste Management Notification Schedule B, and Hazardous Waste Notification Forms; or

(To obtain the forms call Tennessee Department of Environment and Conservation, Division of Solid Waste Management (800) 237-7018)

(ii) A letter requesting an Installation Identification Number. Call the Tennessee Department of Environment and Conservation, Division of Solid Waste Management, Used Oil Management Program at (800) 237-7018 to determine where to send a letter requesting an Installation Identification Number. The letter should include the following information:

(I) Burner company name;

(II) Owner of the burner company;

(III) Mailing address for the burner;

(IV) Name and telephone number for the burner point of contact;

(V) Type of used oil activity; and

(VI) Location of the burner facility.

(d) Rebuttable Presumption for Used Oil [40 CFR 279.63]

1. To ensure that used oil managed at a used oil burner facility is not hazardous waste under the rebuttable presumption of item (2)(a)2(i)(II) of this rule, a used oil burner must determine whether the total halogen content of used oil managed at the facility is above or below 1,000 ppm.

2. The used oil burner must determine if the used oil contains above or below 1,000 ppm total halogens by:

(i) Testing the used oil;

(ii) Applying knowledge of the halogen content of the used oil in light of the materials or processes used; or

(iii) If the used oil has been received from a processor/re-refiner subject to regulation under paragraph (6) of this rule; using information provided by the processor/re-refiner.

3. If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in Rule 0400-12-01-.02(4). The owner or operator may rebut the presumption by

demonstrating that the used oil does not contain hazardous waste (for example, by showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Rule 0400-12-01-.02(5) Appendix VIII).

(i) The rebuttable presumption does not apply to metalworking oils/fluids containing chlorinated paraffins, if they are processed, through a tolling arrangement as described in part (3)(e) of this rule, to reclaim metalworking oils/fluids. The presumption does apply to metalworking oils/fluids if such oils/fluids are recycled in any other manner, or disposed.

(ii) The rebuttable presumption does not apply to used oils contaminated with chlorofluorocarbons (CFCs) removed from refrigeration units where the CFCs are destined for reclamation. The rebuttable presumption does apply to used oils contaminated with CFCs that have been mixed with used oil from sources other than refrigeration units.

4. Record Retention

Records of analyses conducted or information used to comply with parts 1, 2 and 3 of this subparagraph must be maintained by the burner for at least 3 years.

(e) Used Oil Storage [40 CFR 279.64]

Used oil burners are subject to all applicable Spill Prevention, Control and Countermeasures (40 CFR part 112) in addition to the requirements of this paragraph. Used oil burners are also subject to the Underground Storage Tank standards (Rules 1200-01-15-.01 through .11) for used oil stored in underground tanks whether or not the used oil exhibits any characteristics of hazardous waste, in addition to the requirements of this paragraph.

1. Storage Units

Used oil burners may not store used oil in units other than tanks, containers, or units subject to regulation under Rules 0400-12-01-.05 or .06.

2. Condition of Units

Containers and aboveground tanks used to store oil at burner facilities must be:

(i) In good condition (no severe rusting, apparent structural defects or deterioration); and

(ii) Not leaking (no visible leaks).

3. Secondary Containment for Containers

Containers used to store used oil at burner facilities must be equipped with a secondary containment system.

(i) The secondary containment system must consist of, at a minimum:

(I) Dikes, berms or retaining walls; and

(II) A floor. The floor must cover the entire area within the dike, berm, or retaining wall.

(ii) The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

4. Secondary Containment for Existing Aboveground Tanks

Existing aboveground tanks used to store used oil at burner facilities must be equipped with a secondary containment system.

(i) The secondary containment system must consist of, at a minimum:

(I) Dikes, berms or retaining walls; and

(II) A floor. The floor must cover the entire area within the dike, berm, or retaining wall except areas where existing portions of the tank meet the ground; or

(III) An equivalent secondary containment system.

(ii) The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

5. Secondary Containment for New Aboveground Tanks

New aboveground tanks used to store used oil at burner facilities must be equipped with a secondary containment system.

(i) The secondary containment system must consist of, at a minimum:

(I) Dikes, berms or retaining walls; and

(II) A floor. The floor must cover the entire area within the dike, berm, or retaining wall; or

(III) An equivalent secondary containment system.

(ii) The entire containment system, including walls and floor, must be sufficiently impervious to used oil to prevent any used oil released into the containment system from migrating out of the system to the soil, groundwater, or surface water.

6. Labels

(i) Containers and aboveground tanks used to store used oil at burner facilities must be labeled or marked clearly with the words "Used Oil."

(ii) Fill pipes used to transfer used oil into underground storage tanks at burner facilities must be labeled or marked clearly with the words "Used Oil."

7. Response to Releases

Upon detection of a release of used oil to the environment that is not subject to the requirements of the Underground Storage Tank standards (Rules 1200-01-15-.01 through .11), and which occurred after July 1, 1993, the effective date of the used oil regulations in Tennessee, a burner must perform the following cleanup steps:

(i) Stop the release;

(ii) Contain the released used oil;

(iii) Clean up and manage properly the released used oil and other materials; and

(iv) If necessary, repair or replace any leaking used oil storage containers or tanks prior to returning them to service.

(f) Tracking [40 CFR 279.65]

1. Acceptance

Used oil burners must keep a record of each used oil shipment accepted for burning. These records may take the form of a log, invoice, manifest, bill of lading, or other shipping documents. Records for each shipment must include the following information:

(i) The name and address of the transporter who delivered the used oil to the burner;

(ii) The name and address of the generator or processor/re-refiner from whom the used oil was sent to the burner;

(iii) The Installation Identification Number of the transporter who delivered the used oil to the burner;

(iv) The Installation Identification Number (if applicable) of the generator or processor/re-refiner from whom the used oil was sent to the burner;

(v) The quantity of used oil accepted; and

(vi) The date of acceptance.

2. Record Retention

The records described in part 1 of this subparagraph must be maintained for at least three years.

(g) Notices [40 CFR 279.66]

1. Certification

Before a burner accepts the first shipment of off-specification used oil fuel from a generator, transporter, or processor/re-refiner, the burner must provide to the generator, transporter, or processor/re-refiner a one-time written and signed notice certifying that:

(i) The burner has notified the Department stating the location and general description of his used oil management activities; and

(ii) The burner will burn the used oil only in an industrial furnace or boiler identified in part (b)1 of this paragraph.

2. Certification Retention

The certification described in part 1 of this subparagraph must be maintained for three years from the date the burner last receives shipment of off-specification used oil from that generator, transporter, or processor/re-refiner.

(h) Management of Residues [40 CFR 279.67]

Burners who generate residues from the storage or burning of used oil must manage the residues as specified in part (2)(a)5 of this rule.

(8) Standards for Used Oil Fuel Marketers [40 CFR 279 Subpart H]

(a) Applicability [40 CFR 279.70]

1. Any person who conducts either of the following activities is subject to the requirements of this paragraph:

(i) Directs a shipment of off-specification used oil from their facility to a used oil burner; or

(ii) First claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in subparagraph (2)(b) of this rule.

2. The following persons are not marketers subject to this paragraph:

(i) Used oil generators, and transporters who transport used oil received only from generators, unless the generator or transporter directs a shipment of off-specification used oil from their facility to a used oil burner. However, processors/re-refiners who burn some used oil fuel for purposes of processing are considered to be burning incidentally to processing. Thus, generators and transporters who direct shipments of off-specification used oil to processor/re-refiners who incidentally burn used oil are not marketers subject to this paragraph;

(ii) Persons who direct shipments of on-specification used oil and who are not the first person to claim the oil meets the used oil fuel specifications of subparagraph (2)(b) of this rule.

3. Any person subject to the requirements of this paragraph must also comply with one of the following:

(i) Paragraph (3) of this rule - Standards for Used Oil Generators;

(ii) Paragraph (5) of this rule - Standards for Used Oil Transporters and Transfer Facilities;

(iii) Paragraph (6) of this rule - Standards for Used Oil Processors and Re-refiners; or

(iv) Paragraph (7) of this rule - Standards for Used Oil Burners who Burn Off-Specification Used Oil for Energy Recovery.

(b) Prohibitions [40 CFR 279.71]

A used oil fuel marketer may initiate a shipment of off-specification used oil only to a used oil burner who:

1. Has an Installation Identification Number; and

2. Burns the used oil in an industrial furnace or boiler identified in part (7)(b)1 of this rule.

(c) On-specification Used Oil Fuel [40 CFR 279.72]

1. Analysis of Used Oil Fuel

A generator, transporter, processor/re-refiner, or burner may determine that used oil that is to be burned for energy recovery meets the fuel specifications of subparagraph (2)(b) of this rule by performing analyses or obtaining copies of analyses or other information documenting that the used oil fuel meets the specifications.

2. Record Retention

A generator, transporter, processor/re-refiner, or burner who first claims that used oil that is to be burned for energy recovery meets the specifications for used oil fuel under subparagraph (2)(b) of this rule, must keep copies of analyses of the used oil (or other information used to make the determination) for three years.

(d) Notification [40 CFR 279.73]

1. Identification Numbers

A used oil fuel marketer subject to the requirements of this subpart who has not previously complied with the notification requirements of Rule 0400-12-01-.03(2) must comply with these requirements and obtain an Installation Identification Number.

2. A marketer who has not received an Installation Identification Number may obtain one by notifying the Commissioner of their used oil activity by submitting either:

(i) A completed Solid Waste Management Notification, Solid Waste Management Notification Schedule B, and Hazardous Waste Notification Forms; or

(To obtain the forms call the Tennessee Department of Environment and Conservation, Division of Solid Waste Management at (800) 237-7018)

(ii) A letter requesting an Installation Identification Number. The letter should include the following information:

(I) Marketer company name;

(II) Owner of the marketer;

(III) Mailing address for the marketer;

(IV) Name and telephone number for the marketer point of contact; and

(V) Type of used oil activity (i.e., generator directing shipments of off-specification used oil to a burner).

(e) Tracking [40 CFR 279.74]

1. Off-specification Used Oil Delivery

Any used oil marketer who directs a shipment of off-specification used oil to a burner must keep a record of each shipment of used oil to a used oil burner. These records may take the form of a log, invoice, manifest, bill of lading or other shipping documents. Records for each shipment must include the following information:

(i) The name and address of the transporter who delivers the used oil to the burner;

(ii) The name and address of the burner who will receive the used oil;

(iii) The Installation Identification Number of the transporter who delivers the used oil to the burner;

(iv) The Installation Identification Number of the burner;

(v) The quantity of used oil shipped; and

(vi) The date of shipment.

2. On-specification Used Oil Delivery

A generator, transporter, processor/re-refiner, or burner who first claims that used oil that is to be burned for energy recovery meets the fuel specifications under subparagraph (2)(b) of this rule must keep a record of each shipment of used oil to the facility to which it delivers the used oil. Records for each shipment must include the following information:

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

(ii) The quantity of used oil fuel delivered;

(iii) The date of shipment or delivery; and

(iv) A cross-reference to the record of used oil analysis or other information used to make the determination that the oil meets the specification as required under part (c)1 of this paragraph.

3. Record Retention

The records described in parts 1 and 2 of this subparagraph must be maintained for at least three years.

(f) Notices [40 CFR 279.75]

1. Certification

Before a used oil generator, transporter, or processor/re-refiner directs the first shipment of off-specification used oil fuel to a burner, he must obtain a one-time written and signed notice from the burner certifying that:

(i) The burner has notified the Department stating the location and general description of used oil management activities; and

(ii) The burner will burn the off-specification used oil only in an industrial furnace or boiler identified in part (7)(b)1 of this rule.

2. Certification Retention

The certification described in part 1 of this subparagraph must be maintained for three years from the date the last shipment of off-specification used oil is shipped to the burner.

(9) Standards for Use as a Dust Suppressant and Disposal of Used Oil

(a) Applicability [40 CFR 279.80]

The requirements of this paragraph apply to all used oils that cannot be recycled and are therefore being disposed.

(b) Disposal [40 CFR 279.81]

1. Disposal of Hazardous Used Oils

Used oils that are identified as a hazardous waste and cannot be recycled in accordance with this rule must be managed in accordance with the hazardous waste management requirements of Rules 0400-12-01-.01 through .07, .09 and .10.

2. Disposal of Nonhazardous Used Oils

Used oils that are not hazardous wastes and cannot be recycled under this rule must be disposed in accordance with the requirements of T.C.A. §§68-211-101 et seq.

(c) Use as a Dust Suppressant [40 CFR 279.82]

1. The use of used oil as a dust suppressant is prohibited in Tennessee.

Authority: T.C.A. §§ 68-211-101 et seq., 68-211-1001 et seq., 68-212-101 et seq. and 4-5-201 et seq.

0400-12-01-.12 Standards for Universal Waste Management [40 CFR Part 273]

(1) General [40 CFR 273 Subpart A]

(a) Scope [40 CFR 273.1]

1. This rule establishes requirements for managing the following:

(i) Batteries as described in subparagraph (d) of this paragraph;

(ii) Pesticides as described in subparagraph (e) of this paragraph;

(iii) Mercury-containing equipment as described in subparagraph (f) of this paragraph; and

(iv) Lamps as described in subparagraph (g) of this paragraph.

2. This rule provides an alternative set of management standards in lieu of regulation under Rules 0400-12-01-.01 through .10.

(b) Definitions [40 CFR 273.9]

"Ampule" means an airtight vial made of glass, plastic, metal, or any combination of these materials.

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

"Destination Facility" means a facility that treats, disposes of, or recycles a particular category of universal waste, except those management activities described in parts (2)(d)1 and 3 and (3)(d)1 and 3 of this rule. A facility, at which a particular category of universal waste is only accumulated, is not a destination facility for purposes of managing that category of universal waste.

"FIFRA" means the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136-136y).

"Generator" means any person, by site, whose act or process produces hazardous waste identified or listed in Rule 0400-12-01-.02 or whose act first causes a hazardous waste to become subject to regulation.

"Lamp," also referred to as "universal waste lamp," is defined as the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy, most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum. Examples of common universal waste electric lamps include, but are not limited to, fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps.

"Large Quantity Handler of Universal Waste" means a universal waste handler (as defined in this subparagraph) who accumulates 5,000 kilograms or more total of universal waste (batteries, pesticides, lamps, or mercury-containing equipment, calculated collectively) at any time. This designation as a large quantity handler of universal waste is retained through the end of the calendar year in which the 5,000 kilogram limit is met or exceeded.

"Mercury-containing equipment" means a device or part of a device (including thermostats, but excluding batteries and lamps) that contains elemental mercury integral to its function.

"On-site" means the same or geographically contiguous property which may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along the right-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way which he

controls and to which the public does not have access, are also considered on-site property.

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

1. Is a new animal drug under FFDCA section 201(w), or

2. Is an animal drug that has been determined by regulation of the Secretary of Health and Human Services not to be a new animal drug, or

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

"Small Quantity Handler of Universal Waste" means a universal waste handler (as defined in this subparagraph) who does not accumulate 5,000 kilograms or more total of universal waste (batteries, pesticides, mercury-containing equipment or lamps, calculated collectively) at any time.

"Universal Waste" means any of the hazardous wastes listed in subparagraph (a) of this paragraph that are subject to the universal waste requirements of this rule.

"Universal Waste Handler":

1. Means:

   (i) A generator (as defined in this subparagraph) of universal waste; or

   (ii) The owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination.

2. Does not mean:

   (i) A person who treats (except under the provisions of parts (2)(d)1, 3, or 4 of this rule, parts (3)(d)1, 3, or 4 of this rule, or Rule 0400-12-01-.07(1)(c)1(iv)), disposes of, or recycles universal waste; or

   (ii) A person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility (except under the provisions of part (4)(b)2) of this rule.

"Universal Waste Transfer Facility" means any transportation-related facility including loading docks, parking areas, storage areas and other similar areas where shipments of universal waste are held during the normal course of transportation for ten days or less.

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

(Also, see Rule 0400-12-01-.01(2)(a).)

(c) Applicability -- Household and Conditionally Exempt Small Quantity Generator Waste and Non-Hazardous Waste [40 CFR 273.8]

1. Persons managing the wastes listed below may, at their option, manage them under the requirements of this rule:

   (i) Household wastes that are exempt under Rule 0400-12-01-.02(1)(d)2(i) and are also of the same type as the universal wastes defined at subparagraph (b) of this paragraph; and/or

(ii) Conditionally exempt small quantity generator wastes that are exempt under Rule 0400-12-01-.02(1)(e) and are also of the same type as the universal wastes defined at subparagraph (b) of this paragraph; and/or

(iii) Non-hazardous wastes that are of the same type as the universal wastes defined at subparagraph (b) of this paragraph.

2. Persons who commingle the wastes described in subparts 1(i) and (ii) of this subparagraph above together with universal waste regulated under this rule must manage the commingled waste under the requirements of this rule.

(d) Applicability -- Batteries [40 CFR 273.2]

1. Batteries Covered Under this Rule

(i) The requirements of this rule apply to persons managing batteries described in subparagraph (b) of this paragraph, except those listed in part 2 of this subparagraph.

(ii) Spent lead-acid batteries which are not managed under Rule 0400-12-01-.09(7), are subject to management under this rule.

2. Batteries Not Covered Under this Rule

The requirements of this rule do not apply to persons managing the following batteries:

(i) Spent lead-acid batteries that are managed under Rule 0400-12-01-.09(7).

(ii) Batteries, as described in subparagraph (b) of this paragraph that are not yet wastes under Rule 0400-12-01-.02, including those that do not meet the criteria for waste generation in part 3 of this subparagraph.

(iii) Batteries, as described in subparagraph (b) of this paragraph that are not hazardous waste. A battery is a hazardous waste if it exhibits one or more of the characteristics identified in Rule 0400-12-01-.02(3).

3. Generation of Waste Batteries

(i) A used battery becomes a waste on the date it is discarded (e.g., when sent for reclamation).

(ii) An unused battery becomes a waste on the date the handler decides to discard it.

(e) Applicability - Pesticides [40 CFR 273.3]

1. Pesticides Covered Under this Rule

The requirements of this rule apply to persons managing pesticides described in subparagraph (b) of this paragraph, meeting the following conditions, except those listed in part 2 of this subparagraph:

(i) Recalled pesticides that are:

(I) Stocks of a suspended and canceled pesticide that are part of a voluntary or mandatory recall under FIFRA Section 19(b), including, but not limited to those owned by the registrant responsible for conducting the recall; or

(II) Stocks of a suspended or cancelled pesticide, or a pesticide that is not in

compliance with FIFRA, that are part of a voluntary recall by the registrant.

(ii) Stocks of other unused pesticide products that are collected and managed as part of a waste pesticide collection program.

2. Pesticides Not Covered Under this Rule

The requirements of this rule do not apply to persons managing the following pesticides:

(i) Recalled pesticides described in subpart 1(i) of this subparagraph, and unused pesticide products described in subpart 1(ii) of this subparagraph, that are managed by farmers in compliance with Rule 0400-12-01-.03(1)(a)6 that addresses pesticides disposed of on the farmer's own farm in a manner consistent with the disposal instructions on the pesticide label, providing the container is triple rinsed in accordance with Rule 0400-12-01-.02(1)(g)2(iii);

(ii) Pesticides not meeting the conditions set forth in part 1 of this subparagraph. These pesticides must be managed in compliance with the hazardous waste regulations in Rules 0400-12-01-.01 through .10;

(iii) Pesticides that are not wastes under Rule 0400-12-01-.02, including those that do not meet the criteria for waste generation in part 3 of this subparagraph or those that are not wastes as described in part 4 of this subparagraph; and

(iv) Pesticides that are not hazardous waste. A pesticide is a hazardous waste if it is listed in Rule 0400-12-01-.02(4) or if it exhibits one or more of the characteristics identified in Rule 0400-12-01-.02(3).

3. Generation of Waste Pesticides

(i) A recalled pesticide described in subpart 1(i) of this subparagraph becomes a waste on the first date on which both of the following conditions apply:

(I) The generator of the recalled pesticide agrees to participate in the recall; and

(II) The person conducting the recall decides to discard (e.g., burn the pesticide for energy recovery).

(ii) An unused pesticide product described in subpart 1(ii) of this subparagraph becomes a waste on the date the generator decides to discard it.

4. Pesticides That Are Not Wastes

The following pesticides are not wastes:

(i) Recalled pesticides described in subpart 1(i) of this subparagraph, provided that the person conducting the recall:

(I) Has not made a decision to discard (e.g., burn for energy recovery) the pesticide. Until such a decision is made, the pesticide does not meet the definition of "solid waste" under Rule 0400-12-01-.02(1)(b); thus the pesticide is not a hazardous waste and is not subject to hazardous waste requirements, including those of this rule. This pesticide remains subject to the requirements of FIFRA; or

(II) Has made a decision to use a management option that, under Rule 0400-12-01-.02(1)(b), does not cause the pesticide to be a solid waste (i.e., the selected option is use (other than use constituting disposal) or reuse (other than burning for energy recovery) or reclamation). Such a

pesticide is not a solid waste and therefore is not a hazardous waste, and is not subject to the hazardous waste requirements including this rule. This pesticide, including a recalled pesticide that is exported to a foreign destination for use or reuse, remains subject to the requirements of FIFRA.

(ii) Unused pesticide products described in subpart 1(ii) of this subparagraph, if the generator of the unused pesticide product has not decided to discard (e.g., burn for energy recovery) them. These pesticides remain subject to the requirements of FIFRA.

(f) Applicability – Mercury-containing Equipment [40 CFR 273.4]

1. Mercury-containing Equipment Covered Under this Rule

The requirements of this rule apply to persons managing mercury-containing equipment described in subparagraph (b) of this paragraph, except those listed in part 2 of this subparagraph.

2. Mercury-containing Equipment Not Covered Under this Rule

The requirements of this rule do not apply to persons managing the following mercury-containing equipment:

(i) Mercury-containing equipment that are not yet wastes under Rule 0400-12-01-.02. Part 3 of this subparagraph describes when mercury-containing equipment become wastes.

(ii) Mercury-containing equipment that are not hazardous wastes. Mercury-containing equipment is a hazardous waste if it exhibits one or more of the characteristics identified in Rule 0400-12-01-.02(3); and

(iii) Equipment and devices from which the mercury-containing components have been removed.

3. Generation of Waste Mercury-containing Equipment

(i) Used mercury-containing equipment becomes a waste on the date it is discarded.

(ii) Unused mercury-containing equipment becomes a waste on the date the handler decides to discard it.

(g) Applicability - Lamps [40 CFR 273.5]

1. Lamps covered under this rule.

The requirements of this rule apply to persons managing lamps described in subparagraph (b) of this paragraph, except those listed in part 2 of this subparagraph.

2. Lamps not covered under this rule.

The requirements of this rule do not apply to persons managing the following lamps:

(i) Lamps that are not yet wastes under Rule 0400-12-01-.02. Part 3 of this subparagraph describes when lamps become wastes.

(ii) Lamps that are not hazardous waste. A lamp is a hazardous waste if it exhibits one or more of the characteristics identified in Rule 0400-12-01-.02(3).

3. Generation of Waste Lamps.

(i) A used lamp becomes a waste on the date it is discarded.

(ii) A used or an unused lamp becomes a waste on the date the handler decides to discard it.

(h) (RESERVED) [40 CFR 273.6]

(i) (RESERVED) [40 CFR 273.7]

(2) Standards for Small Quantity Handlers of Universal Waste [40 CFR 273 Subpart B]

(a) Applicability [40 CFR 273.10]

This paragraph applies to small quantity handlers of universal waste (as defined in subparagraph (1)(b) of this rule).

(b) Prohibitions [40 CFR 273.11]

A small quantity handler of universal waste is:

1. Prohibited from disposing of universal waste; and

2. Prohibited from diluting or treating universal waste, except by responding to releases as provided in subparagraph (h) of this paragraph; or by managing specific wastes as provided in subparagraph (d) of this paragraph.

(c) Notification [40 CFR 273.12]

A small quantity handler of universal waste is not required to notify the Commissioner of universal waste handling activities.

(d) Waste Management [40 CFR 273.13]

1. Universal Waste Batteries:

A small quantity handler of universal waste must manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(i) A small quantity handler of universal waste must contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the battery, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(ii) A small quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):

(I) sorting batteries by type;

(II) mixing battery types in one container;

(III) discharging batteries so as to remove the electric charge;

(IV) regenerating used batteries;

(V) disassembling batteries or battery packs into individual batteries or cells;

(VI) removing batteries from consumer products; or

(VII) removing electrolyte from batteries.

(iii) A small quantity handler of universal waste who removes electrolyte from batteries, or who generates other solid waste (e.g., battery pack materials, discarded consumer products) as a result of the activities listed subpart (ii) of this part, must determine whether the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste identified in Rule 0400-12-01-.02(3).

(I) If the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste, it is subject to all applicable requirements of Rules 0400-12-01-.01 through .10. The handler is considered the generator of the hazardous electrolyte and/or other waste and is subject to Rule 0400-12-01-.03.

(II) If the electrolyte or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

2. Universal Waste Pesticides

A small quantity handler of universal waste must manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more of the following:

(i) A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; or

(ii) A container that does not meet the requirements of subpart (i) of this part, provided that the unacceptable container is overpacked in a container that does meet the requirements of subpart (i) of this part; or

(iii) A tank that meets the requirements of Rule 0400-12-01-.05(10), except for part (h)3, and subparagraphs (k) and (l); or

(iv) A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

3. Mercury-containing Equipment:

A small quantity handler of universal waste must manage universal waste mercury-containing equipment in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(i) A small quantity handler of universal waste must place in a container any universal waste mercury-containing equipment with noncontained elemental mercury or that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the device, must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions, and must be reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means.

(ii) A small quantity handler of universal waste may remove mercury-containing ampules from universal waste mercury-containing equipment provided the

handler:

(I) Removes and manages the ampules in a manner designed to prevent breakage of the ampules;

(II) Removes the ampules only over or in a containment device (e.g., tray or pan sufficient to collect and contain any mercury released from an ampule in case of breakage);

(III) Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks from broken ampules, from that containment device to a container that meets the requirements of Rule 0400-12-01-.03(4)(e);

(IV) Immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of Rule 0400-12-01-.03(4)(e);

(V) Ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;

(VI) Ensures that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;

(VII) Stores removed ampules in closed, non-leaking containers that are in good condition;

(VIII) Packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation; and

(iii) A small quantity handler of universal waste mercury-containing equipment that does not contain an ampule may remove the open original housing holding the mercury from universal waste mercury-containing equipment provided the handler:

(I) Immediately seals the original housing holding the mercury with an air-tight seal to prevent the release of any mercury to the environment; and

(II) Follows all requirements for removing ampules and managing removed ampules under subpart (ii) of this part; and

(iv) (I) A small quantity handler of universal waste who removes mercury-containing ampules form mercury-containing equipment or seals mercury from mercury-containing equipment in its original housing must determine whether the following exhibit a characteristic of hazardous waste identified in paragraph (3) of Rule 0400-12-01-.02:

I. Mercury or clean-up residues resulting from spills or leaks and/or

II. Other solid waste generated as a result of the removal of mercury-containing ampules or housings (e.g., the remaining mercury-containing device).

(II) If the mercury, residues, and/or other solid waste exhibit a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of Rule 0400-12-01-.01 through .10. The handler is considered the generator of the mercury, residues, and/or other waste and must manage it subject to Rule 0400-12-01-.03.

(III) If the mercury, residues, and/or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

4. Universal Waste Lamps.

(i) A small quantity handler of universal waste must manage lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment as follows:

(I) A small quantity handler of universal waste must contain any lamp in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages must remain closed and must lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

(II) A small quantity handler of universal waste must immediately clean up and place in a container any lamp that is broken and must place in a container any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment. Containers must be closed, structurally sound, compatible with the contents of the lamps and must lack evidence of leakage, spillage or damage that could cause leakage or releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions.

(ii) Small quantity handlers of universal waste mercury-containing lamps may treat mercury-containing lamps for volume reduction at the site where they were generated under the provisions of paragraph (8) of this rule.

(e) Labeling/Marking [40 CFR 273.14]

A small quantity handler of universal waste must label or mark the universal waste to identify the type of universal waste as specified below:

1. Universal waste batteries (i.e., each battery), or a container in which the batteries are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Battery(ies)" or "Waste Battery(ies)" or "Used Battery(ies)."

2. A container (or multiple container package unit), tank, transport vehicle or vessel in which recalled universal waste pesticides as described in subpart (1)(e)1(i) of this rule are contained must be labeled or marked clearly with:

(i) The label that was on or accompanied the product as sold or distributed; and

(ii) The words "Universal Waste - Pesticide(s)" or "Waste Pesticide(s)."

3. A container, tank, or transport vehicle or vessel in which unused pesticide products as described in subpart (1)(e)1(ii) of this rule are contained must be labeled or marked clearly with:

(i) (I) The label that was on the product when purchased, if still legible;

(II) If using the labels described in item (I) of this subpart is not feasible, the appropriate label as required under the Department of Transportation regulation 49 CFR part 172;

(III) If using the labels described in items (I) and (II) of this subpart is not feasible, another label prescribed or designated by the waste pesticide

collection program administered or recognized by a state; and

(ii) The words "Universal Waste - Pesticide(s)" or "Waste Pesticide(s)."

4. (i) Universal waste mercury-containing equipment (i.e., each device), or a container in which the equipment is contained, must be labeled or marked clearly with any of the following phrases: "Universal Waste--Mercury Containing Equipment," "Waste Mercury-Containing Equipment," or "Used Mercury-Containing Equipment."

(ii) A universal waste mercury-containing thermostat or container containing only universal waste mercury-containing thermostats may be labeled or marked clearly with any of the following phrases: "Universal Waste--Mercury Thermostats(s)," "Waste Mercury Thermostat(s)," or "Used Mercury Thermostat(s)."

5. Universal waste lamps (i.e., each lamp), or a container or package in which such lamps are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Lamp(s)" or "Waste Lamp(s)" or "Used Lamp(s)" or "Universal Waste - Bulbs(s)" or "Waste Bulb(s)" or "Used Bulb(s)". Containers or packages destined for out-of-state shipment shall use the term "Lamps" in lieu of "Bulbs".

(f) Accumulation Time Limits [40 CFR 273.15]

1. A small quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of part 2 of this subparagraph are met.

2. A small quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.

3. A small quantity handler of universal waste who accumulates universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:

(i) Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;

(ii) Marking or labeling each individual item of universal waste (e.g., each battery or thermostat) with the date it became a waste or was received;

(iii) Maintaining an inventory system on-site that identifies the date each universal waste became a waste or was received;

(iv) Maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;

(v) Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received; or

(vi) Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is

received.

(g) Employee Training [40 CFR 273.16]

A small quantity handler of universal waste must inform all employees who handle or have responsibility for managing universal waste. The information must describe proper handling and emergency procedures appropriate to the type(s) of universal waste handled at the facility.

(h) Response to Releases [40 CFR 273.17]

1. A small quantity handler of universal waste must immediately contain all releases of universal wastes and other residues from universal wastes.

2. A small quantity handler of universal waste must determine whether any material resulting from the release is hazardous waste, and if so, must manage the hazardous waste in compliance with all applicable requirements of Rules 0400-12-01-.01 through .10. The handler is considered the generator of the material resulting from the release, and must manage it in compliance with Rule 0400-12-01-.03.

(i) Off-site Shipments [40 CFR 273.18]

1. A small quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.

2. If a small quantity handler of universal waste self-transports universal waste off-site, the handler becomes a universal waste transporter for those self-transportation activities and must comply with the transporter requirements of paragraph (4) of this rule while transporting the universal waste.

3. If a universal waste being offered for off-site transportation meets the definition of hazardous materials under 49 CFR 171 through 180, a small quantity handler of universal waste must package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with the applicable Department of Transportation regulations under 49 CFR parts 172 through 180.

4. Prior to sending a shipment of universal waste to another universal waste handler, the originating handler must ensure that the receiving handler agrees to receive the shipment.

5. If a small quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler must either:

   (i) Receive the waste back when notified that the shipment has been rejected, or

   (ii) Agree with the receiving handler on a destination facility to which the shipment will be sent.

6. A small quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that he has received from another handler. If a handler rejects a shipment or a portion of a shipment, he must contact the originating handler to notify him of the rejection and to discuss reshipment of the load. The handler must:

   (i) Send the shipment back to the originating handler, or

   (ii) If agreed to by both the originating and receiving handler, send the shipment to a destination facility.

7. If a small quantity handler of universal waste receives a shipment containing hazardous

waste that is not a universal waste, the handler must immediately notify the Commissioner of the illegal shipment, and provide the name, address, and phone number of the originating shipper. The Commissioner will provide instructions for managing the hazardous waste.

8. If a small quantity handler of universal waste receives a shipment of non-hazardous, non-universal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

(j) Tracking Universal Waste Shipments [40 CFR 273.19]

A small quantity handler of universal waste shall follow the procedures set forth for large quantity handlers in subparagraph (3)(j) of this rule.

(k) Exports [40 CFR 273.20]

A small quantity handler of universal waste who sends universal waste to a foreign destination must:

(Note: See 40 CFR 273.20 for additional requirements.)

1. Comply with the requirements applicable to a primary exporter in Rules 0400-12-01-.03(6)(d),(6)(g)1(i) through (iv), (vi),(g)2 and (6)(h);

2. Export such universal waste only upon consent of the receiving country and in conformance with the EPA Acknowledgment of Consent as defined in Rule 0400-12-01-.03(6); and

3. Provide a copy of the EPA Acknowledgment of Consent for the shipment to the transporter transporting the shipment for export.

(3) Standards for Large Quantity Handlers of Universal Waste [40 CFR 273 Subpart C]

(a) Applicability [40 CFR 273.30]

This paragraph applies to large quantity handlers of universal waste (as defined in subparagraph (1)(b) of this rule).

(b) Prohibitions [40 CFR 273.31]

A large quantity handler of universal waste is:

1. Prohibited from disposing of universal waste; and

2. Prohibited from diluting or treating universal waste, except by responding to releases as provided in subparagraph (h) of this paragraph; or by managing specific wastes as provided in subparagraph (d) of this paragraph.

(c) Notification [40 CFR 273.32]

1. (i) Except as provided in subparts (ii) and (iii) of this part, a large quantity handler of universal waste must have sent written notification of universal waste management to the Commissioner, and received an Installation Identification Number, before meeting or exceeding the 5,000 kilogram storage limit.

(ii) A large quantity handler of universal waste who has already notified the Commissioner of his hazardous waste management activities and has received an Installation Identification Number is not required to renotify under this subparagraph.

(iii) A large quantity handler of universal waste who manages recalled universal

waste pesticides as described in subpart (1)(e)1(i) of this rule and who has sent notification to the Commissioner as required by Rule 0400-12-01-.05 is not required to notify for those recalled universal waste pesticides under this subparagraph.

2. This notification must include:

(i) The universal waste handler's name and mailing address;

(ii) The name and business telephone number of the person at the universal waste handler's site who should be contacted regarding universal waste management activities;

(iii) The address or physical location of the universal waste management activities;

(iv) A list of all of the types of universal waste managed by the handler (e.g, batteries, pesticides, mercury-containing equipment, and lamps); and

(v) A statement indicating that the handler is accumulating more than 5,000 kilograms of universal waste at one time.

(d) Waste Management [40 CFR 273.33]

1. Universal Waste - Batteries:

A large quantity handler of universal waste must manage universal waste batteries in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(i) A large quantity handler of universal waste must contain any universal waste battery that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions in a container. The container must be closed, structurally sound, compatible with the contents of the battery, and must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

(ii) A large quantity handler of universal waste may conduct the following activities as long as the casing of each individual battery cell is not breached and remains intact and closed (except that cells may be opened to remove electrolyte but must be immediately closed after removal):

(I) Sorting batteries by type;

(II) Mixing battery types in one container;

(III) Discharging batteries so as to remove the electric charge;

(IV) Regenerating used batteries;

(V) Disassembling batteries or battery packs into individual batteries or cells;

(VI) Removing batteries from consumer products; or

(VII) Removing electrolyte from batteries.

(iii) A large quantity handler of universal waste who removes electrolyte from batteries, or who generates other solid waste (e.g., battery pack materials, discarded consumer products) as a result of the activities listed above, must determine whether the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste identified in Rule 0400-12-01-.02(3).

(I) If the electrolyte and/or other solid waste exhibit a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of Rules 0400-12-01-.01 through .10. The handler is considered the generator of the hazardous electrolyte and/or other waste and is subject to Rule 0400-12-01-.03.

(II) If the electrolyte or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

2. Universal Waste - Pesticides:

A large quantity handler of universal waste must manage universal waste pesticides in a way that prevents releases of any universal waste or component of a universal waste to the environment. The universal waste pesticides must be contained in one or more of the following:

(i) A container that remains closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; or

(ii) A container that does not meet the requirements of subpart (i) of this part, provided that the unacceptable container is overpacked in a container that does meet the requirements of subpart (i) of this part; or

(iii) A tank that meets the requirements of Rule 0400-12-01-.05(10), except for part (h)3, and subparagraphs (k) and (l); or

(iv) A transport vehicle or vessel that is closed, structurally sound, compatible with the pesticide, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

3. Universal Waste – Mercury-containing Equipment:

A large quantity handler of universal waste must manage universal waste mercury-containing equipment in a way that prevents releases of any universal waste or component of a universal waste to the environment, as follows:

(i) A large quantity handler of universal waste must place in a container any universal waste mercury-containing equipment with non-contained elemental mercury or that shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. The container must be closed, structurally sound, compatible with the contents of the device, must lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions, and must be reasonably designed to prevent the escape of mercury into the environment by volatilization or any other means.

(ii) A large quantity handler of universal waste may remove mercury-containing ampules from universal waste mercury-containing equipment provided the handler:

(I) Removes and manages the ampules in a manner designed to prevent breakage of the ampules;

(II) Removes the ampules only over or in a containment device (e.g., tray or pan sufficient to contain any mercury released from an ampule in case of breakage);

(III) Ensures that a mercury clean-up system is readily available to immediately transfer any mercury resulting from spills or leaks of broken ampules, from that containment device to a container that meets the

requirements of Rule 0400-12-01-.03(4)(e);

(IV) Immediately transfers any mercury resulting from spills or leaks from broken ampules from the containment device to a container that meets the requirements of Rule 0400-12-01-.03(4)(e);

(V) Ensures that the area in which ampules are removed is well ventilated and monitored to ensure compliance with applicable OSHA exposure levels for mercury;

(VI) Ensures that employees removing ampules are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers;

(VII) Stores removed ampules in closed, non-leaking containers that are in good condition;

(VIII) Packs removed ampules in the container with packing materials adequate to prevent breakage during storage, handling, and transportation; and

(iii) A large quantity handler of universal waste mercury-containing equipment that does not contain an ampule may remove the open original housing holding the mercury from universal waste mercury-containing equipment provided the handler:

(I) Immediately seals the original housing holding the mercury with an air-tight seal to prevent the release of any mercury to the environment; and

(II) Follows all requirements for removing ampules and managing removed ampules under subpart (ii) of this part; and

(iv) (I) A large quantity handler of universal waste who removes mercury-containing ampules from mercury-containing equipment or seals mercury from mercury-containing equipment in its original housing must determine whether the following exhibit a characteristic of hazardous waste identified in paragraph (3) of Rule 0400-12-01-.02:

I. Mercury or clean-up residues resulting from spills or leaks and/or

II. Other solid waste generated as a result of the removal of mercury-containing ampules or housings (e.g., remaining mercury-containing devices).

(II) If the mercury, residues, and/or other solid waste exhibit a characteristic of hazardous waste, it must be managed in compliance with all applicable requirements of Rules 0400-12-01-.01 through .10. The handler is considered the generator of the mercury, residues, and/or other waste and is subject to Rule 0400-12-01-.03.

(III) If the mercury, residues, and/or other solid waste is not hazardous, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

4. Universal Waste - Lamps.

(i) A large quantity handler of universal waste must manage lamps in a way that prevents releases of any universal waste or component of a universal waste to the environment as follows:

(I) A large quantity handler of universal waste must contain any lamp in

containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Such containers and packages must remain closed and must lack evidence of leakage, spillage or damage that could cause leakage under reasonably foreseeable conditions.

(II) A large quantity handler of universal waste must immediately clean up and place in a container any lamp that is broken and must place in a container any lamp that shows evidence of breakage, leakage, or damage that could cause the release of mercury or other hazardous constituents to the environment. Containers must be closed, structurally sound, compatible with the contents of the lamps and must lack evidence of leakage, spillage or damage that could cause leakage or releases of mercury or other hazardous constituents to the environment under reasonably foreseeable conditions.

(ii) Large quantity handlers of universal waste lamps may treat the lamps for volume reduction at the site where they were generated under the provisions of paragraph (8) of this rule.

(e) Labeling/Marking [40 CFR 273.34]

A large quantity handler of universal waste must label or mark the universal waste to identify the type of universal waste as specified below:

1. Universal waste batteries (i.e., each battery), or a container or tank in which the batteries are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Battery(ies)," or "Waste Battery(ies)," or "Used Battery(ies);"

2. A container (or multiple container package unit), tank, transport vehicle or vessel in which recalled universal waste pesticides as described in subpart (1)(e)1(i) of this rule are contained must be labeled or marked clearly with:

   (i) The label that was on or accompanied the product as sold or distributed; and

   (ii) The words "Universal Waste - Pesticide(s)" or "Waste - Pesticide(s);"

3. A container, tank, or transport vehicle or vessel in which unused pesticide products as described in subpart (1)(e)1(ii) of this rule are contained must be labeled or marked clearly with:

   (i) (I) The label that was on the product when purchased, if still legible;

   (II) If using the labels described in item (I) of this subpart, the appropriate label as required under the Department of Transportation regulation 49 CFR part 172;

   (III) If using the labels described in items (I) and (II) of this subpart is not feasible, another label prescribed or designated by the pesticide collection program; and

   (ii) The words "Universal Waste - Pesticide(s)" or "Waste Pesticide(s)."

4. (i) Mercury-containing equipment (i.e., each device), or a container in which the equipment is contained, must be labeled or marked clearly with any of the following phrases: "Universal Waste-- Mercury Containing Equipment," "Waste Mercury-Containing Equipment," or "Used Mercury-Containing Equipment."

   (ii) A universal waste mercury-containing thermostat or container containing only universal waste mercury-containing thermostats may be labeled or marked clearly with any of the following phrases: "Universal Waste – Mercury

Thermostat(s)," "Waste Mercury Thermostat(s)," or "Used Mercury Thermostat(s)."

5. Universal waste lamps (i.e., each lamp), or a container or package in which such lamps are contained must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Lamp(s)", or "Waste Lamp(s)", or "Used Lamp(s)" or "Universal Waste - Bulbs(s)" or "Waste Bulb(s)" or "Used Bulb(s)". Containers or packages destined for out-of-state shipment shall use the term "Lamps" in lieu of "Bulbs".

(f) Accumulation Time Limits [40 CFR 273.35]

1. A large quantity handler of universal waste may accumulate universal waste for no longer than one year from the date the universal waste is generated, or received from another handler, unless the requirements of part 2 of this subparagraph are met.

2. A large quantity handler of universal waste may accumulate universal waste for longer than one year from the date the universal waste is generated, or received from another handler, if such activity is solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal. However, the handler bears the burden of proving that such activity was solely for the purpose of accumulation of such quantities of universal waste as necessary to facilitate proper recovery, treatment, or disposal.

3. A large quantity handler of universal waste must be able to demonstrate the length of time that the universal waste has been accumulated from the date it becomes a waste or is received. The handler may make this demonstration by:

(i) Placing the universal waste in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;

(ii) Marking or labeling the individual item of universal waste (e.g., each battery or thermostat) with the date it became a waste or was received;

(iii) Maintaining an inventory system on-site that identifies the date the universal waste being accumulated became a waste or was received;

(iv) Maintaining an inventory system on-site that identifies the earliest date that any universal waste in a group of universal waste items or a group of containers of universal waste became a waste or was received;

(v) Placing the universal waste in a specific accumulation area and identifying the earliest date that any universal waste in the area became a waste or was received; or

(vi) Any other method which clearly demonstrates the length of time that the universal waste has been accumulated from the date it becomes a waste or is received.

(g) Employee Training [40 CFR 273.36]

A large quantity handler of universal waste must ensure that all employees are thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal facility operations and emergencies.

(h) Response to Releases [40 CFR 273.37]

1. A large quantity handler of universal waste must immediately contain all releases of universal wastes and other residues from universal wastes.

2. A large quantity handler of universal waste must determine whether any material

resulting from the release is hazardous waste, and if so, must manage the hazardous waste in compliance with all applicable requirements of Rules 0400-12-01-.01 through .10. The handler is considered the generator of the material resulting from the release, and is subject to Rule 0400-12-01-.03.

(i) Off-site Shipments [40 CFR 273.38]

1. A large quantity handler of universal waste is prohibited from sending or taking universal waste to a place other than another universal waste handler, a destination facility, or a foreign destination.

2. If a large quantity handler of universal waste self-transports universal waste off-site, the handler becomes a universal waste transporter for those self-transportation activities and must comply with the transporter requirements of paragraph (4) of this rule while transporting the universal waste.

3. If a universal waste being offered for off-site transportation meets the definition of hazardous materials under 49 CFR 171 through 180, a large quantity handler of universal waste must package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with the applicable Department of Transportation regulations under 49 CFR parts 172 through 180.

4. Prior to sending a shipment of universal waste to another universal waste handler, the originating handler must ensure that the receiving handler agrees to receive the shipment.

5. If a large quantity handler of universal waste sends a shipment of universal waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler must either:

   (i) Receive the waste back when notified that the shipment has been rejected, or

   (ii) Agree with the receiving handler on a destination facility to which the shipment will be sent.

6. A large quantity handler of universal waste may reject a shipment containing universal waste, or a portion of a shipment containing universal waste that he has received from another handler. If a handler rejects a shipment or a portion of a shipment, he must contact the originating handler to notify him of the rejection and to discuss reshipment of the load. The handler must:

   (i) Send the shipment back to the originating handler, or

   (ii) If agreed to by both the originating and receiving handler, send the shipment to a destination facility.

7. If a large quantity handler of universal waste receives a shipment containing hazardous waste that is not a universal waste, the handler must immediately notify the Commissioner of the illegal shipment, and provide the name, address, and phone number of the originating shipper. The Commissioner will provide instructions for managing the hazardous waste.

8. If a large quantity handler of universal waste receives a shipment of non-hazardous, non-universal waste, the handler may manage the waste in any way that is in compliance with applicable federal, state or local solid waste regulations.

(j) Tracking Universal Waste Shipments [40 CFR 273.39]

1. Receipt of Shipments

A large quantity handler of universal waste must keep a record of each shipment of

universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of universal waste received must include the following information:

(i) The name and address of the originating universal waste handler or foreign shipper from whom the universal waste was sent; (Pesticide collection programs operated under the authority of the Tennessee Department of Agriculture are exempt from the requirements of this subpart provided that the pesticides are received by a universal waste handler for proper management);

(ii) The quantity of each type of universal waste received (e.g., batteries, pesticides, thermostats, lamps);

(iii) The date of receipt of the shipment of universal waste.

2. Shipments Off-site

A large quantity handler of universal waste must keep a record of each shipment of universal waste sent from the handler to other facilities. The record may take the form of a log, invoice, manifest, bill of lading or other shipping document. The record for each shipment of universal waste sent must include the following information:

(i) The name and address of the universal waste handler, destination facility, or foreign destination to whom the universal waste was sent;

(ii) The quantity of each type of universal waste sent (e.g., batteries, pesticides, thermostats, lamps);

(iii) The date the shipment of universal waste left the facility.

3. Record Retention

(i) A large quantity handler of universal waste must retain the records described in part 1 of this subparagraph for at least three years from the date of receipt of a shipment of universal waste.

(ii) A large quantity handler of universal waste must retain the records described in part 2 of this subparagraph for at least three years from the date a shipment of universal waste left the facility.

(iii) An organization with multiple locations may retain their universal waste records at an in-state consolidation point acceptable to the Division. If a site inspection of the records by the Division is not feasible due to the use of a records consolidation point, a copy of the site's universal waste records shall be sent, within seven working days of the request, to the Division.

(k) Exports [40 CFR 273.40]

A large quantity handler of universal waste who sends universal waste to a foreign destination must:

(Note: See 40 CFR 273.40 for additional EPA requirements.)

1. Comply with the requirements applicable to a primary exporter in Rule 0400-12-01-.03(6)(d), (6)(g)1(i) through (iv),(vi), (g)2 and (6)(h);

2. Export such universal waste only upon consent of the receiving country and in conformance with the EPA Acknowledgment of Consent as defined in Rule 0400-12-01-.03(6); and

3. Provide a copy of the EPA Acknowledgment of Consent for the shipment to the

transporter transporting the shipment for export.

(4) Standards for Universal Waste Transporters [40 CFR 273 Subpart D]

(a) Applicability [40 CFR 273.50]

This subpart applies to universal waste transporters (as defined in subparagraph (1)(b) of this rule).

(b) Prohibitions [40 CFR 273.51]

A universal waste transporter is:

1. Prohibited from disposing of universal waste; and

2. Prohibited from diluting or treating universal waste, except by responding to releases as provided in subparagraph (e) of this paragraph or by managing specific wastes as provided in Rule 0400-12-01-.07(1)(c)1(iv).

(c) Waste Management [40 CFR 273.52]

1. A universal waste transporter must comply with all applicable U.S. Department of Transportation regulations in 49 CFR part 171 through 180 for transport of any universal waste that meets the definition of hazardous material in 49 CFR 171.8. For purposes of the Department of Transportation regulations, a material is considered a hazardous waste if it is subject to the Hazardous Waste Manifest requirements of the Department specified in Rule 0400-12-01-.03. Because universal waste does not require a hazardous waste manifest, it is not considered hazardous waste under the Department of Transportation regulations.

2. Some universal waste materials are regulated by the Department of Transportation as hazardous materials because they meet the criteria for one or more hazard classes specified in 49 CFR 173.2. As universal waste shipments do not require a manifest under Rule 0400-12-01-.03, they may not be described by the DOT proper shipping name "hazardous waste, (l) or (s), n.o.s.", nor may the hazardous material's proper shipping name be modified by adding the word "waste".

(d) Storage Time Limits [40 CFR 273.53]

1. A universal waste transporter may only store the universal waste at a universal waste transfer facility for ten days or less.

2. If a universal waste transporter stores universal waste for more than ten days, the transporter becomes a universal waste handler and must comply with the applicable requirements of paragraphs (2) or (3) of this rule while storing the universal waste.

(e) Response to Releases [40 CFR 273.54]

1. A universal waste transporter must immediately contain all releases of universal wastes and other residues from universal wastes.

2. A universal waste transporter must determine whether any material resulting from the release is hazardous waste, and if so, it is subject to all applicable requirements of Rules 0400-12-01-.01 through .10. If the waste is determined to be a hazardous waste, the transporter is subject to Rule 0400-12-01-.03.

(f) Off-site Shipments [40 CFR 273.55]

1. A universal waste transporter is prohibited from transporting the universal waste to a place other that a universal waste handler, a destination facility, or a foreign destination.

2. If the universal waste being shipped off-site meets the Department of Transportation's definition of hazardous materials under 49 CFR 171.8, the shipment must be properly described on a shipping paper in accordance with the applicable Department of Transportation regulations under 49 CFR part 172.

(g) Exports [40 CFR 273.56]

A universal waste transporter transporting a shipment of universal waste to a foreign destination may not accept a shipment if the transporter knows the shipment does not conform to the EPA Acknowledgment of Consent. In addition the transporter must ensure that:

(Note: See 40 CFR 273.56 for additional EPA requirements.)

1. A copy of the EPA Acknowledgment of Consent accompanies the shipment; and

2. The shipment is delivered to the facility designated by the person initiating the shipment.

(5) Standards for Destination Facilities [40 CFR 273 Subpart E]

(a) Applicability [40 CFR 273.60]

1. The owner or operator of a destination facility (as defined in subparagraph (1)(b) of this rule) is subject to all applicable requirements of Rules 0400-12-01-.05, .06, .07, .08, .09 and .10, including the notification requirement under Rule 0400-12-01-.03(2).

2. The owner or operator of a destination facility that recycles a particular universal waste without storing that universal waste before it is recycled must comply with Rule 0400-12-01-.02(1)(f)3(ii).

(b) Off-site Shipments [40 CFR 273.61]

1. The owner or operator of a destination facility is prohibited from sending or taking universal waste to a place other than a universal waste handler, another destination facility or foreign destination.

2. The owner or operator of a destination facility may reject a shipment containing universal waste, or a portion of a shipment containing universal waste. If the owner or operator of the destination facility rejects a shipment or a portion of a shipment, he must contact the shipper to notify him of the rejection and to discuss reshipment of the load. The owner or operator of the destination facility must:

(i) Send the shipment back to the original shipper, or

(ii) If agreed to by both the shipper and the owner or operator of the destination facility, send the shipment to another destination facility.

3. If the owner or operator of a destination facility receives a shipment containing hazardous waste that is not a universal waste, the owner or operator of the destination facility must immediately notify the Commissioner of the illegal shipment, and provide the name, address, and phone number of the shipper. The Commissioner will provide instructions for managing the hazardous waste.

4. If the owner or operator of a destination facility receives a shipment of non-hazardous, non-universal waste, the owner or operator may manage the waste in any way that is in compliance with applicable federal or state solid waste regulations.

(c) Tracking Universal Waste Shipments [40 CFR 273.62]

1. The owner or operator of a destination facility must keep a record of each shipment of universal waste received at the facility. The record may take the form of a log, invoice, manifest, bill of lading, or other shipping document. The record for each shipment of

universal waste received must include the following information:

(i) The name and address of the universal waste handler, destination facility, or foreign shipper from whom the universal waste was sent;

(ii) The quantity of each type of universal waste received (e.g., batteries, pesticides, thermostats, lamps);

(iii) The date of receipt of the shipment of universal waste.

2. The owner or operator of a destination facility must retain the records described in part 1 of this subparagraph for at least three years from the date of receipt of a shipment of universal waste.

(6) Import Requirements [40 CFR 273 Subpart F]

(a) Imports [40 CFR 273.70]

Persons managing universal waste that is imported from a foreign country into the United States are subject to the applicable requirements of this rule, immediately after the waste enters the United States, as indicated in parts 1 through 3 of this subparagraph:

1. A universal waste transporter is subject to the universal waste transporter requirements of paragraph (4) of this rule.

2. A universal waste handler is subject to the small or large quantity handler of universal waste requirements of paragraphs (2) or (3) of this rule, as applicable.

3. An owner or operator of a destination facility is subject to the destination facility requirements of paragraph (5) of this rule.

4. (Reserved) [40 CFR 273.70(d)]

(7) Petitions to Include Other Wastes under this Rule [40 CFR 273 Subpart G]

(a) General [40 CFR 273.80]

1. Any person seeking to add a hazardous waste or a category of hazardous waste to this rule may petition for a regulatory amendment under this paragraph and Rules 0400-12-01-.01(3)(a) and (d).

2. To be successful, the petitioner must demonstrate to the satisfaction of the Commissioner that regulation under the universal waste regulations of Rule 0400-12-01-.12 is: appropriate for the waste or category of waste; will improve management practices for the waste or category of waste; and will improve implementation of the hazardous waste program. The petition must include the information required by Rule 0400-12-01-.01(3)(a)2. The petition should also address as many of the factors listed in subparagraph (b) of this paragraph as are appropriate for the waste or waste category addressed in the petition.

3. The Commissioner will evaluate petitions using the factors listed in subparagraph (b) of this paragraph. The Commissioner will grant or deny a petition using the factors listed in subparagraph (b) of this paragraph. The decision will be based on the weight of evidence showing that regulation under this rule is appropriate for the waste or category of waste, will improve management practices for the waste or category of waste, and will improve implementation of the hazardous waste program.

(b) Factors for Petitions to Include Other Wastes under this Rule [40 CFR 273.81]

1. The waste or category of waste, as generated by a wide variety of generators, is listed in Rule 0400-12-01-.02(4), or (if not listed) a proportion of the waste stream exhibits one or

more characteristics of hazardous waste identified in Rule 0400-12-01-.02(3). (When a characteristic waste is added to the universal waste regulations of this rule by using a generic name to identify the waste category (e.g., batteries), the definition of universal waste in Rules 0400-12-01-.01(2)(a) and subparagraph (1)(b) of this rule will be amended to include only the hazardous waste portion of the waste category (e.g., hazardous waste batteries). Thus, only the portion of the waste stream that does exhibit one or more characteristics (i.e., is hazardous waste) is subject to the universal waste regulations of this rule;

2. The waste or category of waste is not exclusive to a specific industry or group of industries, is commonly generated by a wide variety of types of establishments (including, for example, households, retail and commercial businesses, office complexes, conditionally exempt small quantity generators, small businesses, government organizations, as well as large industrial facilities);

3. The waste or category of waste is generated by a large number of generators (e.g., more than 1,000 nationally) and is frequently generated in relatively small quantities by each generator;

4. Systems to be used for collecting the waste or category of waste (including packaging, marking, and labeling practices) would ensure close stewardship of the waste;

5. The risk posed by the waste or category of waste during accumulation and transport is relatively low compared to other hazardous wastes, and specific management standards proposed or referenced by the petitioner (e.g., waste management requirements appropriate to be added to subparagraphs (2)(d), (3)(d) and (4)(c) of this rule; and/or applicable Department of Transportation requirements) would be protective of human health and the environment during accumulation and transport;

6. Regulation of the waste or category of waste under this rule will increase the likelihood that the waste will be diverted from non-hazardous waste management systems (e.g, the municipal waste stream, non-hazardous industrial or commercial waste stream, municipal sewer or stormwater systems) to recycling, treatment, or disposal in compliance with the Act;

7. Regulation of the waste or category of waste under this rule will improve implementation of and compliance with the hazardous waste regulatory program; and/or

8. Such other factors as may be appropriate.

(8) Standards for the Owner or Operator of a "Universal Waste Lamp Crusher System"

(a) Applicability

This paragraph applies to handlers of universal waste lamps (defined in subparagraph (1)(b) of this rule) operating a "crusher system" for the purpose of volume reduction.

(b) Prohibitions

A crusher of universal waste lamps is:

1. Prohibited from disposing of universal waste; and

2. Prohibited from diluting or treating universal waste, except by crushing for volume reduction purposes in compliance with the Permit-by-rule requirement of Rule 0400-12-01-.07(1)(c)1(iv) or as otherwise provided in this rule.

3. Prohibited from mixing in any hazardous or non-hazardous waste with the crushed lamps. No filters, tools, solid waste, etc., shall be placed in the container of crushed lamps.

(c) Operation

The following standards for operation shall be adhered to:

1. The lamps must be crushed in a system designed and operated to minimize the loss of mercury to the atmosphere. Any air exhausted from the unit shall pass through a well-maintained high efficiency particulate air filter (HEPA) designed to minimize such loss. Detailed records regarding this operation must be kept and made available for review for at least three (3) years, including, but not limited to, the technology employed for crushing, including any certification or testing data provided by the manufacturer of the crushing unit.

2. The handler immediately transfers any material recovered from a spill or leak to a container and has available equipment necessary to comply with this container that meets the requirements of Rule 0400-12-01-.03(4)(e), requirements.

3. The handler ensures that the area in which the lamps are crushed is well-ventilated and monitored to ensure compliance with applicable Occupational Safety and Health Administration (OSHA) exposure levels for mercury.

4. The handler ensures that employees crushing lamps are thoroughly familiar with proper waste mercury handling and emergency procedures, including transfer of mercury from containment devices to appropriate containers.

5. The crushed lamps are stored in closed, non-leaking containers that are in good condition (e.g., no severe rusting, apparent structural defects or deterioration), suitable to prevent releases during storage, handling and transportation.

(d) Labeling/Marking

A handler of universal waste lamps and crushing device must label or mark the universal waste lamps or containers as specified below:

1. Universal waste lamps (i.e., each lamp), or a container in which the lamps or crushed lamps are contained, must be labeled or marked clearly with any one of the following phrases: "Universal Waste - Lamp(s)", or "Waste Lamp(s)", or "Used Mercury Lamp(s), or placing "Crushed", as appropriate, first on the label.

(e) Accumulation Time Limits

1. A handler of universal waste lamps and crusher operator may accumulate such universal waste for no longer than one year from the date it is generated, or received from another handler.

2. A handler of universal waste mercury-containing lamps who accumulates them must be able to demonstrate the length of time they have been accumulated from the date the lamps becomes a waste or are received. The handler may make this demonstration by:

   (i) Placing the lamps in a container and marking or labeling the container with the earliest date that any universal waste in the container became a waste or was received;

   (ii) Maintaining an inventory system available for review that identifies the date each shipment of universal waste lamps became a waste or was received, the date it was sent for recycling, and the name and address of the destination facility or handler.

(f) Employee Training

A handler of universal waste lamps must inform all employees who handle or have responsibility for managing them. The information must describe proper handling and emergency procedures.

(g) Response to Releases

1. A handler of universal waste lamps must immediately contain all releases and other residues.

2. A handler of universal waste lamps must determine whether any material resulting from the release is hazardous waste, and if so, must manage the hazardous waste in compliance with all applicable requirements of Rules 0400-12-01-.01 through .10. The handler is considered the generator of the material resulting from the release, and must manage it in compliance with Rule 0400-12-01-.03.

(h) Off-site Shipments

1. A handler of universal waste lamps is prohibited from sending or taking such waste to a place other than another universal waste handler or a destination facility.

2. If a handler of universal waste lamps self-transports such waste off-site, the handler becomes a universal waste transporter for those self-transportation activities and must comply with the transporter requirements of paragraph (4) of this rule while transporting the universal waste.

3. If a universal waste being offered for off-site transportation meets the definition of hazardous materials under 49 CFR 171 through 180, a handler of universal waste must package, label, mark and placard the shipment, and prepare the proper shipping papers in accordance with the applicable Department of Transportation regulations under 49 CFR Parts 100 through 185.

4. If a handler of universal waste lamps sends a shipment of such waste to another handler or to a destination facility and the shipment is rejected by the receiving handler or destination facility, the originating handler must either:

(i) Receive the waste back when notified that the shipment has been rejected, or

(ii) Agree with the receiving handler on a destination facility to which the shipment will be sent.

Authority: T.C.A. §§68-212-101 et seq. and 4-5-201 et seq.

I certify that the information included in this filing is an accurate and complete representation of the intent and scope of rulemaking proposed by the agency.

Date: June 2, 2011

Signature: J Mac

Name of Officer: Mike Apple

Title of Officer: Director, Division of Solid Waste Management

JO McCRARY
STATE OF TENNESSEE NOTARY PUBLIC
DAVIDSON COUNTY
My Commission Expires May 8, 2012

Subscribed and sworn to before me on: June 2 2011

Notary Public Signature: Jo McCrary

My commission expires on: May 8, 2012

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Filed with the Department of State on: 6/7/11

Tre Hargett

Tre Hargett
Secretary of State

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