

US EPA ARCHIVE DOCUMENT

Part 268 - Land Disposal Restrictions**Subpart A - General**

Sec.

- 268.1 Purpose, scope, and applicability.
- 268.2 Definitions applicable to this part.
- 268.3 Dilution prohibited as a substitute for treatment.
- 268.4 Treatment surface impoundment exemption.
- 268.5 Procedures for Case-by-Case Extensions to an Effective Date.
- 268.6 Petition to allow land disposal of a waste prohibited under Subpart C of Part 268.
- 268.7 Testing, tracking, and recordkeeping requirements for generators, treaters, and disposal facilities.
- 268.8 **[Reserved]**
- 268.9 Special rules regarding wastes that exhibit a characteristic.

Subpart B - Schedule for land disposal prohibition and establishment of Treatment Standards

- 268.10 **[Reserved]**
- 268.11 **[Reserved]**
- 268.12 **[Reserved]**
- 268.13 Schedule for Wastes Identified or listed after November 8, 1984.
- 268.14 Surface impoundment exemptions.

Subpart C - Prohibitions on land disposal

- 268.30 Waste specific prohibitions - Solvent wastes.
- 268.31 Waste specific prohibitions - Dioxin-containing wastes.
- 268.32 **[Reserved]**
- 268.33 **[Reserved]**
- 268.34 Waste specific prohibitions - toxicity characteristic metal wastes.
- 268.35 Waste specific prohibitions - petroleum refining wastes.
- 268.36 **[Reserved]**
- 268.37 Waste specific prohibitions - Ignitable and Corrosive Characteristic Wastes Whose Treatment Standards Have Been Vacated.
- 268.38 Waste specific prohibitions-newly identified organic toxicity characteristic wastes and newly listed coke by-product and chlorotoluene production wastes.
- 268.39 Waste specific prohibitions-End-of pipe CWA, CWA-equivalent, and Class I nonhazardous injection well treatment standards; spent aluminum potliners; and carbamate wastes.

Subpart D - Treatment standards

- 268.40 Applicability of treatment standards.
- 268.41 Treatment standards expressed as concentrations in waste extracts.
- 268.42 Treatment standards expressed as specified technologies.
- 268.43 Treatment Standards expressed as waste concentrations.
- 268.44 Variance from a treatment standard.
- 268.45 Treatment standards for hazardous debris.
- 268.46 Alternative treatment standards based on HTMR.
- 268.48 Universal Treatment Standards
- 268.49 Alternative LDR treatment standards for contaminated soil.

Subpart E - Prohibitions on storage

268.50 Prohibitions on storage of restricted wastes.

Appendices to Part 268

Appendix I [Reserved]

Appendix II [Reserved]

Appendix III [Reserved]

Appendix IV Wastes Excluded From Lab Packs Under the Alternate Treatment Standards of §268.42.

Appendix V [Reserved]

Appendix VI Recommended technologies to achieve deactivation of characteristics in §268.42.

Appendix VII Effective dates of surface disposed wastes regulated in the LDRs.

Appendix VIII LDR Effective Dates of Injected Prohibited Hazardous Wastes

Appendix IX Extraction Procedure (EP) Toxicity test method and structural integrity test (SW-846, Method 1310A).

Appendix X [Reserved]

Appendix XI Metal bearing wastes prohibited from dilution in a combustion unit according to §268.3(c)¹.

Subpart A - General

Section 268.1 Purpose, scope and applicability.

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

(b) Except as specifically provided otherwise in this part or Part 261 of these regulations, the requirements of this part apply to persons who generate or transport hazardous waste and owners and operators of hazardous waste treatment, storage, and disposal facilities.

(c) Restricted wastes may continue to be land disposed as follows:

(1) Where persons have been granted an extension to the effective date of a prohibition under Subpart C of this part or pursuant to §268.5, with respect to those wastes covered by the extension;

(2) Where persons have been granted an exemption from a prohibition pursuant to a petition under §268.6, with respect to those wastes and units covered by the petition;

(3) Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under this part, are not prohibited if the wastes:

(i) Are disposed into a nonhazardous or hazardous injection well as defined under 40 CFR 144.6(a); and

(ii) Do not exhibit any prohibited characteristic of hazardous waste identified in Part 261, Subpart C at the point of injection.

(4) Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under this part, are not prohibited if the wastes meet any of the following criteria, unless the wastes are subject to a specified method of treatment other than DEACT in §268.40, or are D003 reactive cyanide:

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

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

(iii) The wastes are managed in a zero discharge system engaged in Clean Water Act-equivalent treatment as defined in §268.37(a); and

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

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

(e) The following hazardous wastes are not subject to any provision of Part 268:

(1) Waste generated by small quantity generators of less than 100 kilograms of non-acute hazardous waste or less than 1 kilogram of acute hazardous waste per month, as defined in §261.5 of these regulations;

(2) Waste pesticides that a farmer disposes of pursuant to §262.70;

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

(4) 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.

(f) Universal waste handlers and universal waste transporters (as defined in 260.10) are exempt from 268.7 and 268.50 for the hazardous wastes listed below. These handlers are subject to regulation under Part 273.

(1) Batteries as described in §273.2 of these regulations;

(2) Pesticides as described in §273.3 of these regulations;

(3) Thermostats as described in §273.4 of these regulations; and

(4) Lamps as described in §273.5 of these regulations.

(Amended June 19, 1992, August 1, 1995, July 23, 1996, August 21, 1997, January 1, 1999, June 2, 2000)

Section 268.2 Definitions applicable to this part.

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

(a) "**Halogenated organic compounds**" or HOCs means those compounds having a carbon-halogen bond which are listed under Appendix III to this part.

(b) "**Hazardous constituent or constituents**" means those constituents listed in Appendix VIII to Part 261 of these regulations.

(c) "**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.

(d) "**Nonwastewaters**" are wastes that do not meet the criteria for wastewaters in paragraph (f) of this section.

(e) "**Polychlorinated biphenyls or PCBs**" are halogenated organic compounds defined in accordance with 761.3.

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

(g) **"Debris"** means solid material exceeding a 60 mm particle size that is intended for disposal and that is: A manufactured object; or plant or animal matter; or natural geologic material. However, the following materials are not debris: Any material for which a specific treatment standard is provided in Subpart D, Part 268, namely lead acid batteries, cadmium batteries, and radioactive lead solids; Process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by §268.45 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

(h) **"Hazardous debris"** means debris that contains a hazardous waste listed in Subpart D of Part 261 of these regulations, or that exhibits a characteristic of hazardous waste identified in Subpart C of Part 261 of these regulations. 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 §268.3.

(i) **"Underlying hazardous constituent"** means any constituent listed in §268.48, 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.

(j) **"Inorganic metal-bearing waste"** is one for which EPA has established treatment standards for metal hazardous constituents, and which does not otherwise contain significant organic or cyanide content as described in §268.3(c)(1), and is specifically listed in Appendix XI of this part.

(k) **"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 §268.3.

(Amended August 1, 1995, July 23, 1996, January 1, 1999, August 23, 1999, June 2, 2000)

Section 268.3 Dilution prohibited as a substitute for treatment.

(a) Except as provided in paragraph (b) of this section, no generator, transporter, handler, or owner or operator of a treatment, storage, or disposal facility shall in any way dilute a restricted waste or the residual from treatment of a restricted waste as a substitute for adequate treatment to achieve compliance with Subpart D of this part, to circumvent the effective date of a prohibition in Subpart C of this part, to otherwise avoid a prohibition in Subpart C of this part, or to circumvent a land disposal prohibition imposed by RCRA Section 3004.

(b) Dilution of wastes that are hazardous only because they exhibit a characteristic in 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 section unless a method other than DEACT has been specified in §268.40 as the treatment standard, or unless the waste is a D003 reactive cyanide wastewater or nonwastewater.

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

(1) The waste contains hazardous organic constituents or cyanide at levels exceeding the constituent-specific treatment standard found in §268.48;

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

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

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

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

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

(d) 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.

(Amended August 1, 1995, January 1, 1999, August 23, 1999)

Section 268.4 Treatment surface impoundment exemption.

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

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

(2) The following conditions are met:

(i) Sampling and testing. For wastes with treatment standards in Subpart D of this part and/or prohibition levels in Subpart C of this part or RCRA Section 3004(d), the residues from treatment are analyzed, as specified in §268.7 or §268.32, to determine if they meet the applicable treatment standards or where no treatment standards have been established for the waste, the applicable prohibition levels. The sampling method, specified in the waste analysis plan under §264.13 or §265.13, must be designed such that representative samples of the sludge and the supernatant are tested separately rather than mixed to form homogeneous samples.

(ii) *Removal.* The following treatment residues (including any liquid waste) must be removed at least annually; residues which do not meet the treatment standards promulgated under Subpart D of this part; residues which do not meet the prohibition levels established under Subpart C of this part or imposed by federal law pursuant to the HSWA of 1984; residues which are from the treatment of wastes prohibited from land disposal under Subpart C of this part or imposed by federal law pursuant to the provisions of the HSWA of 1984; or residues from managing listed wastes which are not delisted under §260.22 of these regulations. 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.

(3) The impoundment meets the design requirements of §264.221(a) or §265.221(c) of these regulations, regardless that the unit may not be new, expanded, or a replacement, and be in compliance with applicable ground water monitoring requirements of Subpart F of Part 264 or Part 265 of these regulations unless:

(i) Exempted pursuant to §264.221(d) or (e) of these regulations, or to §265.221(c) or (d) of these regulations or,

(ii) Upon application by the owner or operator, the Secretary, after notice and an opportunity to comment, has granted a waiver of the requirements on the basis that the surface impoundment:

(A) Has at least one liner, for which there is no evidence that such liner is leaking:

(B) Is located more than one-quarter mile from an underground source of drinking water; and
 (C) Is in compliance with generally applicable ground water monitoring requirements for facilities with permits; or,

(iii) Upon application by the owner or operator, the Secretary, after notice and an opportunity to comment, has granted a modification to the requirements on the basis of a demonstration the surface impoundment is located, designed, and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

(4) The owner or operator submits to the Secretary a written certification that the requirements of §268.4(a)(3) have been met. The following certification is required:

I certify under penalty of law that the requirements of §268.4(a)(3) of these regulations have been met for all surface impoundments being used to treat restricted wastes. I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

(b) Evaporation of hazardous constituents as the principal means of treatment is not considered to be treatment for purposes of an exemption under this section.

(Amended August 21, 1997, January 1, 1999, August 23, 1999)

Section 268.5 Procedures for Case-by-Case Extensions to an Effective Date

(a) Any person who generates, treats, stores, or disposes of a hazardous waste may submit an application to the Regional Administrator for an extension to the effective date of any applicable restriction established under RCRA Subpart C of this part. The applicant must demonstrate the following:

(1) He has made a good-faith effort to locate and contract with treatment, recovery, or disposal facilities nationwide to manage his waste in accordance with the effective date of the applicable restriction established under RCRA Subpart C of this part;

(2) He has entered into a binding contractual commitment to construct or otherwise provide alternative treatment, recovery (e.g., recycling), or disposal capacity that meets the treatment standards specified in RCRA Subpart D or, where treatment standards have not been specified, such treatment, recovery, or disposal capacity is protective of human health and the environment.

(3) Due to circumstances beyond the applicant's control, such alternative capacity cannot reasonably be made available by the applicable effective date. This demonstration may include a showing that the technical and practical difficulties associated with providing the alternative capacity will result in the capacity not being available by the applicable effective date;

(4) The capacity being constructed or otherwise provided by the applicant will be sufficient to manage the entire quantity of waste that is the subject of the application;

(5) He provides a detailed schedule for obtaining required operating and construction permits or an outline of how and when alternative capacity will be available;

(6) He has arranged for adequate capacity to manage his waste during an extension and has documented in the application the location of all sites at which the waste will be managed; and

(7) Any waste managed in a surface impoundment or landfill during the extension period will meet the requirements of paragraph (h)(2) of this section.

(b) An authorized representative signing an application described under paragraph (a) of this section shall make the following certification:

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

(c) After receiving an application for an extension, the Regional Administrator may request any additional information which he deems as necessary to evaluate the application.

(d) An extension will apply only to the waste generated at the individual facility covered by the application and will not apply to restricted waste from any other facility.

(e) On the basis of the information referred to in paragraph (a) of this section, after notice and opportunity for comment, and after consultation with appropriate State agencies in all affected States, the Regional Administrator may grant an extension of up to 1 year from the effective date. The Regional Administrator may renew this extension for up to 1 additional year upon the request of the applicant if the demonstration required in paragraph (a) of this section can still be made. In no event will an extension extend beyond 24 months from the applicable effective date specified in Subpart C of Part 268. The length of any extension authorized will be determined by the Regional Administrator based on the time required to construct or obtain the type of capacity needed by the applicant as described in the completion schedule discussed in paragraph (a)(5) of this section. The Regional Administrator will give public notice of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a petition will be published in the Federal Register.

(f) Any person granted an extension under this section must immediately notify the Regional Administrator as soon as he has knowledge of any change in the conditions certified to in the application.

(g) Any person granted an extension under this section shall submit written progress reports at intervals designated by the Regional Administrator. Such reports must describe the overall progress made toward constructing or otherwise providing alternative treatment, recovery or disposal capacity; must identify any event which may cause or has caused a delay in the development of the capacity; and must summarize the steps taken to mitigate the delay. The Regional Administrator can revoke the extension at any time if the applicant does not demonstrate a good-faith effort to meet the schedule for completion, if the Agency denies or revokes any required permit, if conditions certified in the application change, or for any violation of these regulations.

(h) Whenever the Regional Administrator establishes an extension to an effective date under this section, during the period for which such extension is in effect:

(1) The storage restrictions under §268.50(a) do not apply; and

(2) Such hazardous waste may be disposed in a landfill or surface impoundment only if such unit is in compliance with the technical requirements of the following provisions regardless of whether such unit is existing, new, or a replacement or lateral expansion.

(i) The landfill, if in interim status, is in compliance with the requirements of Subpart F of Part 265 and §265.301 (a), (c), and (d) of these regulations; or,

(ii) The landfill, if permitted, is in compliance with the requirements of Subpart F of Part 264 and §264.301(c), (d) and (e) of 40 CFR; or

(iii) The surface impoundment, if in interim status, is in compliance with the requirements of Subpart F of Part 265, §265.221(a), (c), and (d) of these regulations, and RCRA §3005(j)(1); or

(iv) The surface impoundment, if permitted, is in compliance with the requirements of Subpart F of Part 264 and §264.221(c), (d) and (e) of 40 CFR; or

(v) The surface impoundment, if newly subject to RCRA §3005(j)(1) due to the promulgation of additional listings or characteristics for the identification of hazardous waste, is in compliance with the requirements of Subpart F of Part 265 of 40 CFR within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of §265.221(a), (c) and (d) of 40 CFR within 48 months after the promulgation of additional listings or characteristics of hazardous waste. If a national capacity variance is granted, during the period the variance is in effect, the surface impoundment, if newly subject to RCRA §3005(j)(1) due to the promulgation of additional listings or characteristics of hazardous waste, is in compliance with the requirements of Subpart F of Part 265 of 40 CFR within 12 months after the promulgation of additional listings or

characteristics of hazardous waste, and with the requirements of §265.221(a), (c) and (d) of these regulations within 48 months after the promulgation of additional listings or characteristics of hazardous waste; or

(vi) The landfill, if disposing of containerized liquid hazardous wastes containing PCBs at concentrations greater than or equal to 50 ppm but less than 500 ppm, is also in compliance with the requirements of 40 CFR 761.75 and DGRHW, Parts 264 and 265.

(i) Pending a decision on the application the applicant is required to comply with all restrictions on land disposal under this part once the effective date for the waste has been reached.

(Amended August 1, 1995, August 21, 1997)

Section 268.6 Petitions to allow land disposal of a waste prohibited under Subpart C, Part 268.

(a) Any person seeking an exemption from a prohibition under Subpart C of this part for the disposal of a restricted hazardous waste in a particular unit or units must submit a petition to the Administrator demonstrating, to a reasonable degree of certainty, that there will be no migration of hazardous constituents from the disposal unit or injection zone for as long as the wastes remain hazardous. The demonstration must include the following components:

(1) An identification of the specific waste and the specific unit for which the demonstration will be made;

(2) A waste analysis to describe fully the chemical and physical characteristics of the subject waste;

(3) A comprehensive characterization of the disposal unit site including an analysis of background air, soil, and water quality;

(4) A monitoring plan that detects migration at the earliest practicable time;

(5) Sufficient information to assure the Administrator that the owner or operator of a land disposal unit receiving restricted waste(s) will comply with other applicable Federal, State, and local laws.

(b) The demonstration referred to in paragraph (a) of this section must meet the following criteria:

(1) All waste and environmental sampling, test, and analysis data must be accurate and reproducible to the extent that state-of-the-art techniques allow;

(2) All sampling, testing, and estimation techniques for chemical and physical properties of the waste and all environmental parameters must have been approved by the Administrator;

(3) Simulation models must be calibrated for the specific waste and site conditions, and verified for accuracy by comparison with actual measurements;

(4) A quality assurance and quality control plan that addresses all aspects of the demonstration must be approved by the Administrator; and,

(5) An analysis must be performed to identify and quantify any aspects of the demonstration that contribute significantly to uncertainty. This analysis must include an evaluation of the consequences of predictable future events, including, but not limited to, earthquakes, floods, severe storm events, droughts, or other natural phenomena.

(c) Each petition referred to in paragraph (a) of this section must include the following:

(1) A monitoring plan that describes the monitoring program installed at and/or around the unit to verify continued compliance with the conditions of the variance. This monitoring plan must provide information on the monitoring of the unit and/or the environment around the unit. The following specific information must be included in the plan:

(i) The media monitored in the cases where monitoring of the environment around the unit is required;

(ii) The type of monitoring conducted at the unit, in the cases where monitoring of the unit is required;

(iii) The location of the monitoring stations;

(iv) The monitoring interval (frequency of monitoring at each station);

(v) The specific hazardous constituents to be monitored;

- (vi) The implementation schedule for the monitoring program;
- (vii) The equipment used at the monitoring stations;
- (viii) The sampling and analytical techniques employed; and
- (ix) The data recording/reporting procedures.

(2) Where applicable, the monitoring program described in paragraph (c)(1) of this section must be in place for a period of time specified by the Administrator, as part of his approval of the petition, prior to receipt of prohibited waste at the unit.

(3) The monitoring data collected according to the monitoring plan specified under paragraph (c)(1) of this section must be sent to the Administrator according to a format and schedule specified and approved in the monitoring plan, and

(4) A copy of the monitoring data collected under the monitoring plan specified under paragraph (c)(1) of this section must be kept on-site at the facility in the operating record.

(5) The monitoring program specified under paragraph (c)(1) of this section meet the following criteria:

(i) All sampling, testing, and analytical data must be approved by the Administrator and must provide data that is accurate and reproducible.

(ii) All estimation and monitoring techniques must be approved by the Administrator.

(iii) A quality assurance and quality control plan addressing all aspects of the monitoring program must be provided to and approved by the Administrator.

(d) Each petition must be submitted to the Administrator.

(e) After a petition has been approved, the owner or operator must report any changes in conditions at the unit and/or the environment around the unit that significantly depart from the conditions described in the variance and affect the potential for migration of hazardous constituents from the units as follows:

(1) If the owner or operator plans to make changes to the unit design, construction, or operation, such a change must be proposed, in writing, and the owner or operator must submit a demonstration to the Administrator at least 30 days prior to making the change. The Administrator will determine whether the proposed change invalidates the terms of the petition and will determine the appropriate response. Any change must be approved by the Administrator prior to being made.

(2) If the owner or operator discovers that a condition at the site which was modeled or predicted in the petition does not occur as predicted, this change must be reported, in writing, to the Administrator within 10 days of discovering the change. The Administrator will determine whether the reported change from the terms of the petition requires further action, which may include termination of waste acceptance and revocation of the petition, petition modifications, or other responses.

(f) If the owner or operator determines that there is migration of hazardous constituent(s) from the unit, the owner or operator must:

(1) Immediately suspend receipt of prohibited waste at the unit, and

(2) Notify the Administrator, in writing, within 10 days of the determination that a release has occurred.

(3) Following receipt of the notification the Administrator will determine, within 60 days of receiving notification, whether the owner or operator can continue to receive prohibited waste in the unit and whether the variance is to be revoked. The Administrator shall also determine whether further examination of any migration is warranted under applicable provisions of Part 264 or Part 265.

(g) Each petition must include the following statement signed by the petitioner or an authorized representative:

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

(h) After receiving a petition, the Administrator may request any additional information that reasonably may be required to evaluate the demonstration.

(i) If approved, the petition will apply to land disposal of the specific restricted waste at the individual disposal unit described in the demonstration and will not apply to any other restricted waste at that disposal unit, or to that specific restricted waste at any other disposal unit.

(j) The Administrator will give public notice in the Federal Register of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a petition will be published in the Federal Register.

(k) The term of a petition granted under this section shall be no longer than the term of the RCRA permit if the disposal unit is operating under a RCRA permit, or up to a maximum of 10 years from the date of approval provided under paragraph (g) of this section if the unit is operating under interim status. In either case, the term of the granted petition shall expire upon the termination or denial of a RCRA permit, or upon the termination of interim status or when the volume limit of waste to be land disposed during the term of petition is reached.

(l) Prior to the Administrator's decision, the applicant is required to comply with all restrictions on land disposal under this part once the effective date for the waste has been reached.

(m) The petition granted by the Administrator does not relieve the petitioner of his responsibilities in the management of hazardous waste under these regulations.

(n) Liquid hazardous wastes containing polychlorinated biphenyls at concentrations greater than or equal to 500 ppm are not eligible for an exemption under this section.

Section 268.7 Testing, tracking, and recordkeeping requirements for generators, treaters, and disposal facilities.

(a) Requirements for generators:

(1) 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 §§ 268.40, 268.45, or 268.49. This determination can be made 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 for the waste obtained using test method 1311 in "Test Methods of Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as referenced in §260.11 of these regulations, 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. 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 §268.40, and are described in detail in 40 CFR §268.42, 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 §268.9 of this part in addition to any applicable requirements in this section.

(2) If the waste or contaminated soil does not meet the treatment standard: 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 "268.7(a)(2)" of the Generator Paperwork Requirements Table in §268.7(a)(4). 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 §268.49(c).

(ii) [Reserved]

(3) 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 "268.7(a)(3)" of the Generator Paperwork Requirements Table in §268.7(a)(4) 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 Part 268, Subpart D. I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

(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 "§268.7(a)(3)" of the Generator Paperwork Requirements Table in §268.7(a)(4).

(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 §261.3(f) of these regulations are not subject to these requirements.

(4) 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 §268.5, disposal in a no-migration unit under §268.6, or a national capacity variance or case-by-case capacity variance under Subpart C of this part. 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 "268.7(a)(4)" 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

| Require information | §268.7 (a)(2) | §268.7 (a)(3) | §268.7 (a)(4) | §268.7 (a)(9) |
|---|------------------|------------------|------------------|------------------|
| 1. EPA Hazardous Waste Numbers 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 §§ 268.2(d) and (f)) 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 §268.45: the contaminants subject to treatment, as described in §268.45(b); and an indication that these contaminants are being treated to comply with §268.45. | ✓ | | ✓ | |
| 8. For contaminated soil subject to LDRs as provided in §268.49(a), the constituents subject to treatment as described in §268.49(d), 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 §268.49(c) or the universal treatment standards. | ✓ | ✓ | | |
| 9. A certification is needed (see applicable section for exact wording). | | ✓ | | ✓ |

(5) If a generator is managing and treating prohibited waste or contaminated soil in tanks, containers, or containment buildings regulated under §262.34 to meet applicable LDR treatment standards found at §268.40, 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, §268.45, however, are not subject to these waste analysis requirements.) The plan must be kept on site in the generator's records, and the following requirements must be met:

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

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

(iii) Wastes shipped off-site pursuant to this paragraph must comply with the notification requirements of §268.7(a)(3).

(6) 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, as referenced in §260.11 of these regulations, and all waste analysis data must be retained on-site in the generator's files.

(7) 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 §261.2 through §261.6 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 §261.4(a)(2) 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 RCRA Subtitle C regulation, and the disposition of the waste, in the facility's on-site files.

(8) Generators must retain on-site a copy of all notices, certifications, waste analysis data, and other documentation produced pursuant to this section 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. In the event that a new notice, certification, waste analysis data or other information is sent to a receiving facility, the superseded information must be retained in the generator's files for at least three years after the date of the new information. 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 Secretary. The requirements of this paragraph apply to solid wastes even when the hazardous characteristic is removed prior to disposal, or when the waste is excluded from the definition of hazardous or solid waste under §§ 261.2 through 261.6, or exempted from regulation, subsequent to the point of generation.

(9) If a generator is managing a lab pack containing hazardous wastes and wishes to use the alternative treatment standard for lab packs found at §268.42(c):

(i) With the initial shipment of waste to a treatment facility, the generator must submit a notice that provides the information in column "§268.7(a)(9)" in the Generator Paperwork Requirements Table of paragraph (a)(4) of this section, 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 Part 268 and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at §268.42(c). 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 §268.2(i)) need not be determined.

(iv) The generator must also comply with the requirements in paragraphs (a)(6) and (a)(7) of this section.

§268.7

(10) Small quantity generators with tolling agreements pursuant to §262.20(e) must comply with the applicable notification and certification requirements of paragraph (a) of this section for the initial shipment of the waste subject to the agreement. Such generators must retain on-site a copy of the notification and certification, together with the tolling agreement, for at least three years after termination or expiration of the agreement. The three-year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Secretary.

(b) Treatment facilities must test their wastes according to the frequency specified in their waste analysis plans as required by §264.13 (for permitted TSDs) or §265.13 (for interim status facilities). Such testing must be performed as provided in paragraphs (b)(1), (b)(2) and (b)(3) of this section.

(1) 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 as incorporated by reference in §260.11 of these regulations) to assure that the treatment residues extract meet the applicable treatment standards.

(2) 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.

(3) 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 | §268.7(b) |
|--|-----------|
| 1. EPA Hazardous Waste Numbers 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 §§ 268.2(d) and (f)) 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 §268.49(a), the constituents subject to treatment as described in §268.49(d) and the following statement, "this contaminated soil [does/does not] contain listed hazardous waste and [does/does not] exhibit "this characteristic of hazardous waste and [is subject to/complies with] the soil treatment standards as provided by §268.49(c). | ✓ |
| 6. A certification statement is needed (see applicable section for exact wording). . | ✓ |

(4) 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 and believe that it has been maintained and operated properly so as to comply with treatment standards specified in §268.49 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 §261.3(e) of these regulations (i.e., debris treated by an extraction or destruction technology provided by Table 1, §268.45, and debris that the Secretary has determined does not contain hazardous waste), however, is subject to the notification and certification requirements of paragraph (d) of this section rather than the certification requirements of this paragraph.

(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 §268.40(d), 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 §268.42, 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 §268.40 (other than those expressed as a method of treatment), or §268.49, and that contain underlying hazardous constituents as defined in §268.2(i); 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 §268.40 or §268.49 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 §268.2(i) that are treated on-site to remove the hazardous characteristic to treat underlying hazardous constituents to levels in §268.48 Universal Treatment Standards, the certification must state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of §268.40 to remove the hazardous characteristic and that underlying hazardous constituents, as defined in §268.2(i) have been treated on-site to meet the §268.48 Universal Treatment Standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(5) 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 section.

(6) Where the wastes are recyclable materials used in a manner constituting disposal subject to the provisions of §266.20(b) regarding treatment standards and prohibition levels, the owner or operator of a treatment facility (i.e., the recycler) is not required to notify the receiving facility, pursuant to paragraph (b)(3) of this section. With each shipment of such wastes the owner or operator of the recycling facility must submit a certification described in paragraph (b)(4) of this section, and a notice which includes the information listed in paragraph (b)(3) of this section (except the manifest number) to the Secretary, or his delegated representative. The recycling facility also must keep records of the name and location of each entity receiving the hazardous waste-derived product.

(7) Where the wastes are recyclable materials used in a manner constituting disposal subject to the provisions of §266.20(b) regarding treatment standards and prohibition levels, the owner or operator of a treatment facility (i.e., the recycler) is not required to notify the receiving facility, pursuant to paragraph (b)(4) of this section. With each shipment of such wastes the owner or operator of the recycling facility must submit a certification described in paragraph (b)(5) of this section, and a notice which includes the information listed in paragraph (b)(4) of this section (except the manifest number) to the Secretary, or his delegated representative. The recycling facility also must keep records of the name and location of each entity receiving the hazardous waste-derived product.

(c) Except where the owner or operator is disposing of any waste that is a recyclable material used in a manner constituting disposal pursuant to §266.20(b), the owner or operator of any land disposal facility disposing any waste subject to restrictions under this part must:

(1) Have copies of the notice and certifications specified in paragraph (a) or (b) of this section.

(2) Test the waste, or an extract of the waste or treatment residue developed using test method 1311 (the Toxicity Characteristic Leaching Procedure), described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 as incorporated by reference in §260.11 of these regulations), to assure that the wastes or treatment residues are in compliance with the applicable treatment standards set forth in Subpart D of this part. Such testing must be performed according to the frequency specified in the facility's waste analysis plan as required by §264.13 or §265.13 of these regulations.

(d) Generators or treaters who first claim that hazardous debris is excluded from the definition of hazardous waste under §261.3(e) of these regulations (i.e., debris treated by an extraction or destruction technology provided by Table 1, §268.45, and debris that the Secretary has determined does not contain hazardous waste) are subject to the following notification and certification requirements:

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

(i) The name and address of the Subtitle D facility receiving the treated debris;

(ii) A description of the hazardous debris as initially generated, including the applicable EPA Hazardous Waste Number(s); and

(iii) For debris excluded under §261.3(e)(1) of these regulations, the technology from Table 1, §268.45, used to treat the debris.

(2) The notification must be updated if the debris is shipped to a different facility, and, for debris excluded under §261.2(e)(1) of these regulations, if a different type of debris is treated or if a different technology is used to treat the debris.

(3) For debris excluded under §261.3(e)(1) of these regulations, the owner or operator of the treatment facility must document and certify compliance with the treatment standards of Table 1, §268.45, as follows:

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

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

(iii) For each shipment of treated debris, a certification of compliance with the treatment standards must be signed by an authorized representative and placed in the facility's files. The certification must state the following: "I certify under penalty of law that the debris has been treated in accordance with the requirements of §268.45. I am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment."

(e) Generators and treaters who first receive from EPA or DNREC a determination that a given contaminated soil subject to LDRs as provided in §268.49(a) no longer contains a listed hazardous waste and generators and treaters who first determine that a contaminated soil subject to LDRs as provided in §268.49(a) no longer exhibits a characteristic of hazardous waste must:

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

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

(Amended August 1, 1995, July 23, 1996, August 21, 1997, January 1, 1999, August 23, 1999, June 2, 2000, April 23, 2001)

Section 268.8 [Reserved]

Section 268.9 Special Rules Regarding Wastes that Exhibit a Characteristic

(a) The initial generator of a solid waste must determine each EPA Hazardous Waste Number (waste code) applicable to the waste in order to determine the applicable treatment standards under Subpart D of this part. For purposes of Part 268, the waste will carry the waste code for any applicable listed waste (Part 261, Subpart D). In addition, where the waste exhibits a characteristic, the waste will carry one or more of the characteristic waste codes (Part 261, Subpart C), except when the treatment standard for the listed waste operates in lieu of the treatment standard for the characteristic waste, as specified in paragraph (b) of this section. If the generator determines that their waste displays a hazardous characteristic (and is not D001 nonwastewaters treated by CMBST, RORGS, OR POLYM of §268.42, Table 1), the generator must determine the underlying hazardous constituents (as defined at §268.2(i)) in the characteristic waste.

(b) Where a prohibited waste is both listed under 40 CFR Part 261, Subpart D and exhibits a characteristic under 40 CFR Part 261, Subpart C, the treatment standard for the waste code listed in Part 261, Subpart D will operate in lieu of the standard for the waste code under 40 CFR Part 261, Subpart C, provided that the treatment standard for the listed waste includes a treatment standard for the constituent that causes the waste to exhibit the characteristic. Otherwise, the waste must meet the treatment standards for all applicable listed and characteristic waste codes.

(c) In addition to any applicable standards determined from the initial point of generation, no prohibited waste which exhibits a characteristic under 40 CFR Part 261, Subpart C may be land disposed unless the waste complies with the treatment standards under Subpart D of this part.

(d) Wastes that exhibit a characteristic are also subject to §268.7 requirements, except that once the waste is no longer hazardous, a one-time notification and certification must be placed in the generators or treaters files and sent to the EPA region or authorized state, except for those facilities discussed in paragraph (f) of this section. The notification and certification that is placed in the generators or treaters files must be updated if the process or operation generating the waste changes and/or if the Subtitle D facility receiving the waste changes. However, the generator or treater need only notify the EPA region or an authorized state on an annual basis if such changes occur. Such notification and certification should be sent to the EPA region or authorized state by the end of the calendar year, but no later than December 31.

(1) The notification must include the following information:

(i) For characteristic wastes other than those managed on site in a wastewater treatment system subject to the Clean Water Act (CWA), zero-dischargers engaged in CWA-equivalent treatment, or Class I nonhazardous injection wells, the name and address of the Subtitle D facility receiving the waste shipment; and

(ii) A description of the waste as initially generated, including the applicable EPA hazardous waste code(s), treatability group(s), and underlying hazardous constituents (as defined in §268.2(i)), 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.

(iii) The treatment standards applicable to the waste at the point of generation.

(2) The certification must be signed by an authorized representative and must state the language found in §268.7(b)(4).

(i) If treatment removes the characteristic but does not meet standards applicable to underlying hazardous constituents, then the certification found in §268.7(b)(4)(iv) applies.

(ii) **[Reserved]**

(3) For characteristic wastes whose ultimate disposal will be into a Class I nonhazardous injection well, and compliance with the treatment standards found in §268.48 for underlying hazardous constituents is achieved through pollution prevention that meets the criteria set out at 40 CFR 148.1(d), the following information must also be included:

(i) A description of the pollution prevention mechanism and when it was implemented if already complete;

(ii) The mass of each underlying hazardous constituent before pollution prevention;

(iii) The mass of each underlying hazardous constituent that must be removed, adjusted to reflect variations in mass due to normal operating conditions; and

(iv) The mass reduction of each underlying hazardous constituent that is achieved.

(e) For decharacterized wastes managed on-site in a wastewater treatment system subject to the Clean Water Act (CWA) or zero-dischargers engaged in CWA-equivalent treatment, compliance with the treatment standards found at §268.48 must be monitored quarterly, unless the treatment is aggressive biological treatment, in which case compliance must be monitored annually. Monitoring results must be kept in on-site files for 5 years.

(f) For decharacterized wastes managed on-site in a wastewater treatment system subject to the Clean Water Act (CWA) for which all underlying hazardous constituents (as defined in §268.2), are addressed by a CWA permit, this compliance must be documented and this documentation must be kept in on-site files.

(g) For characteristic wastes whose ultimate disposal will be into a Class I nonhazardous injection well which qualifies for the de minimis exclusion described in §268.1, information supporting that qualification must be kept in on-site files.

(Amended August 1, 1995, July 23, 1996, August 21, 1997, January 1, 1999, June 2, 2000)

Subpart B – Schedule for Land Disposal Prohibition and Establishment of Treatment Standards

Sections 268.10 - 268.12 [Reserved]

Section 268.13 Schedule for wastes identified or listed after November 8, 1984.

In the case of any hazardous waste identified or listed under §3001 after November 8, 1984, the Administrator shall make a land disposal prohibition determination within 6 months after the date of identification or listing.

(Amended August 21, 1997)

Section 268.14 Surface impoundment exemptions.

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

(b) Wastes which are newly identified or listed under §3001 after November 8, 1984, and stored in a surface impoundment that is newly subject to Subtitle C of RCRA as a result of the additional identification or listing, may continue to be stored in the surface impoundment for 48 months after the promulgation of the additional listing or characteristic, not withstanding that the waste is otherwise prohibited from land disposal, provided that the surface impoundment is in compliance with the requirements of Subpart F of Part 265 of these regulations within 12 months after promulgation of the new listing or characteristic.

(c) Wastes which are newly identified or listed under §3001 after November 8, 1984, and treated in a surface impoundment that is newly subject to Subtitle C of RCRA as a result of the additional identification or listing, may continue to be treated in that surface impoundment, not withstanding that the waste is otherwise prohibited from land disposal, provided that surface impoundment is in compliance with the requirements of Subpart F of Part 265 of these regulations 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 §268.4.

(Amended August 1, 1995)

Subpart C - Prohibitions on Land Disposal

Section 268.30 Waste specific prohibitions -- Solvent wastes.

(a) Effective August 11, 1997, the following wastes are prohibited from land disposal: the wastes specified in Part 261 as EPA Hazardous Waste Numbers F032, F034, and F035.

(b) 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 EPA Hazardous Waste Numbers F032, F034, and F035.

(c) Between May 12, 1997 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 §268.5(h)(2) of this part.

(d) The requirements of paragraphs (a) and (b) of this section do not apply if:

- (1) The wastes meet the applicable treatment standards specified in Subpart D of this part;
- (2) Persons have been granted an exemption from a prohibition pursuant to a petition under §268.6, with respect to those wastes and units covered by the petition;
- (3) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under §268.44; or

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to §268.5, with respect to those wastes covered by the extension.

(e) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in §268.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Universal Treatment Standard levels of §268.48 of this part, the waste is prohibited from land disposal, and all requirements of Part 268 are applicable, except as otherwise specified.

(Amended June 19, 1992, August 21, 1997, January 1, 1999)

Section 268.31 Waste specific prohibitions -- Dioxin-containing wastes.

(a) Effective November 8, 1988, the dioxin-containing wastes specified in §261.31 as EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, F027, and F028, are prohibited from land disposal unless the following condition applies:

(1) The F020-F023 and F026-F028 dioxin-containing waste is contaminated soil and debris resulting from a response action taken under §§104 or 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) or a corrective action taken under 7 Del. C., Chapter 63.

(b) Effective November 8, 1990, the F020-F023 and F026-F028 dioxin-containing wastes listed in paragraph (a)(1) of this section are prohibited from land disposal.

(c) Between November 8, 1988, and November 8, 1990, wastes included in paragraph (a)(1) of this section may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in §268.5(h)(2) and all other applicable requirements of Parts 264 and 265 of these regulations.

(d) The requirements of paragraphs (a) and (b) of this section do not apply if:

(1) The wastes meet the standards of Subpart D of this part; or

(2) Persons have been granted an exemption from a prohibition pursuant to a petition under §268.6, with respect to those wastes and units covered by the petition; or

(3) Persons have been granted an extension to the effective date of a prohibition pursuant to §268.5, with respect to those wastes covered by the extension.

(Amended June 19, 1992)

Section 268.32 - [Reserved]

Section 268.33 [Reserved]

Section 268.34 Waste specific prohibitions - toxicity characteristic metal wastes.

(a) Effective August 24, 1998, the following wastes are prohibited from land disposal: the wastes specified in Part 261 as EPA Hazardous Waste numbers D004 - D011 that are newly identified (i.e., wastes, soil, or debris identified as hazardous by the Toxic 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 Part 261.

(b) Effective November 26, 1998, 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.

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

(d) Between May 26, 1998 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 Toxic 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 §268.5(h)(2) of this Part.

(e) The requirements of paragraphs (a) and (b) of this section do not apply if:

- (1) The wastes meet the applicable treatment standards specified in Subpart D of this part;
- (2) Persons have been granted an exemption from a prohibition pursuant to a petition under §268.6, with respect to those wastes and units covered by the petition;
- (3) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under §268.44; or

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to §268.5, with respect to these wastes covered by the extension.

(f) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in §268.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents (including underlying hazardous constituents in characteristic wastes) in excess of the applicable Universal Treatment Standard levels of §268.48 of this Part, the waste is prohibited from land disposal, and all requirements of Part 268 are applicable, except as otherwise specified.

(Amended August 23, 1999)

Section 268.35 Waste specific prohibitions - petroleum refining wastes.

(a) Effective February 8, 1999, the wastes specified in §261 as EPA Hazardous Wastes Numbers 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.

(b) The requirements of paragraph (a) of this section do not apply if:

- (1) The wastes meet the applicable treatment standards specified in Subpart D of this part;
- (2) Persons have been granted an exemption from a prohibition pursuant to a petition under §268.6, with respect to those wastes and units covered by the petition;
- (3) The wastes meet the applicable treatment standards established pursuant to a petition granted under §268.44;

(4) Hazardous debris that have met treatment standards in §268.40 or in the alternative treatment standards in §268.45; or

(5) Persons have been granted an extension to the effective date of a prohibition pursuant to §268.5, with respect to these wastes covered by the extension.

(c) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in §268.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as

concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Universal Treatment Standard levels of §268.48 of this Part, the waste is prohibited from land disposal, and all requirements of Part 268 are applicable, except as otherwise specified.

Section 268.36 - [Reserved]

Section 268.37 Waste specific prohibitions - ignitable and corrosive characteristic wastes whose treatment standards were vacated.

(a) Effective August 9, 1993, the wastes specified in §261.21 as D001 (and is not in the High TOC Ignitable Liquids Subcategory), and specified in §261.22 as D002, that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies.

(b) Effective February 10, 1994, the wastes specified in §261.21 as D001 (and is not in the High TOC Ignitable Liquids Subcategory), and specified in §261.22 as D002, that are managed in systems defined in 40 CFR 144.6(e) and 146.6(e) as Class V injection wells, that do not engage in CWA-equivalent treatment before injection, are prohibited from land disposal.

(Amended August 1, 1995)

Section 268.38 Waste specific prohibitions-newly identified organic toxicity characteristic wastes and newly listed coke by-product and chlorotoluene production wastes.

(a) Effective December 19, 1994, the wastes specified in §261.32 as Hazardous Waste numbers K141, K142, K143, K144, K145, K147, K148, K149, K150, and K151 are prohibited from land disposal. In addition, debris contaminated with Hazardous Waste numbers F037, F038, K107-K112, K117, K118, K123-K126, K131, K132, K136, U328, U353, U359, and soil and debris contaminated with D012-D043, K141-K145, and K147-K151 are prohibited from land disposal. The following wastes that are specified in §261.24, Table 1 as Hazardous Waste numbers: D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043 that are not radioactive, or that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that are zero dischargers that do not engage in CWA-equivalent treatment before ultimate land disposal, or that are injected in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/ sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or better than these technologies.

(b) On September 19, 1996, radioactive wastes that are mixed with D018-D043 that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/ sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to

perform equally or greater than these technologies. Radioactive wastes mixed with K141-K145, and K147-K151 are also prohibited from land disposal. In addition, soil and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.

(c) Between December 19, 1994 and September 19, 1996, the wastes included in paragraphs (b) of this section may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in §268.5(h)(2) of this part.

(d) The requirements of paragraphs (a), (b), and (c) of this section do not apply if:

- (1) The wastes meet the applicable treatment standards specified in Subpart D of this part;
- (2) Persons have been granted an exemption from a prohibition pursuant to a petition under §268.6, with respect to those wastes and units covered by the petition;
- (3) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under §268.44;
- (4) Persons have been granted an extension to the effective date of a prohibition pursuant to §268.5, with respect to these wastes covered by the extension.

(e) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in §268.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Subpart D levels, the waste is prohibited from land disposal, and all requirements of Part 268 are applicable, except as otherwise specified.

(Amended July 23, 1996)

Section 268.39 Waste specific prohibitions--End-of-pipe CWA, CWA-equivalent, and Class I nonhazardous injection well treatment standards; spent aluminum potliners; and carbamate wastes.

(a) On July 8, 1996, the wastes specified in §261.32 as Hazardous Waste numbers K156-K159, and K161; and in §261.33 as Hazardous Waste numbers 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 these wastes are prohibited from land disposal.

(b) On July 8, 1996, the wastes identified in §261.23 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 §268.40)).

(c) On September 21, 1998, the wastes specified in §261.32 as EPA Hazardous Waste number K088 are prohibited from land disposal. In addition, soil and debris contaminated with these wastes are prohibited from land disposal.

(d) 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, and U409-U411 are prohibited from land disposal. In addition, soil and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.

(e) Between July 8, 1996, and April 8, 1998, the wastes included in paragraphs (a), (c), and (d) of this section may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in §268.5(h)(2).

(f) The requirements of paragraphs (a), (b), (c), and (d) of this section do not apply if:

- (1) The wastes meet the applicable treatment standards specified in Subpart D of this part;
- (2) Persons have been granted an exemption from a prohibition pursuant to a petition under §268.6, with respect to those wastes and units covered by the petition;

(3) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under §268.44;

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to §268.5, with respect to these wastes covered by the extension.

(g) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in §268.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Subpart D levels, the waste is prohibited from land disposal, and all requirements of this Part 268 are applicable, except as otherwise specified.

(Amended January 1, 1999)

Subpart D - Treatment Standards

Section 268.40 Applicability of treatment standards.

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

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

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

(3) The waste must be treated using the technology specified in the table ("technology standard"), which are described in detail in §268.42, Table 1-Technology Codes and Description of Technology-Based Standards.

(b) For wastewaters, compliance with concentration level standards is based on maximums for any one day, except for D004 through D011 wastes for which the previously promulgated treatment standards based on grab samples remain in effect. For all nonwastewaters, compliance with concentration level standards is based on grab sampling. For wastes covered by the waste extract standards, the test Method 1311, the Toxicity Characteristic Leaching Procedure found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, as incorporated by reference in §260.11, must be used to measure compliance. An exception is made for D004 and D008, for which either of two test methods may be used: Method 1311, or Method 1310, the Extraction Procedure Toxicity Test. For wastes covered by a technology standard, the wastes may be land disposed after being treated using that specified technology or an equivalent treatment technology approved by the Administrator under the procedures set forth in §268.42(b).

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

(d) Notwithstanding the prohibitions specified in paragraph (a) of this section, treatment and disposal facilities may demonstrate (and certify pursuant to §268.7(b)(5)) compliance with the treatment standards for organic constituents specified by a footnote in the table "Treatment Standards for Hazardous Wastes" in this section, provided the following conditions are satisfied:

(1) The treatment standards for the organic constituents were established based on incineration in units operated in accordance with the technical requirements of Part 264, Subpart O, or based on combustion in fuel substitution units operating in accordance with applicable technical requirements;

(2) The treatment or disposal facility has used the methods referenced in paragraph (d)(1) of this section to treat the organic constituents; and

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

(e) For characteristic wastes (D001-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 §268.2(i)) must meet Universal Treatment Standards, found in §268.48, Table Universal Treatment Standards, prior to land disposal as defined in §268.2(c) of this part.

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

(g) Between August 26, 1996 and March 4, 1999, the treatment standards for the wastes specified in §261.32 as Hazardous Waste numbers K156-K161; and in §261.33 as Hazardous Waste numbers P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U277-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U400-U404, U407, and U409-U411; and soil contaminated with these wastes; may be satisfied by either meeting the constituent concentrations presented in the table "Treatment Standards for Hazardous Wastes" in this section, or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST at §268.42 Table 1, for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at §268.42 Table 1, for wastewaters.

(h) 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 re-treated to meet treatment standards in this section prior to land disposal.

(i) Zinc micronutrient fertilizers that are produced for the general public's use and that are produced from or contain recycled characteristic hazardous wastes (D004-D011) are subject to the applicable treatment standards in §268.41 contained in the 40 CFR, Parts 260 – 299, edition revised as of July 1, 1990.

(j) Effective September 4, 1998, the treatment standards for the wastes specified in §261.33 as EPA Hazardous Waste numbers 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 section, or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST at §268.42 Table 1 of this part, for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at §268.42 Table 1 of this part, for wastewaters.

Treatment Standards for Hazardous Wastes

Note: The treatment standards that heretofore appeared in tables in §§ 268.41, 268.42, and 268.43 of this part have been consolidated into the table "Treatment Standards for Hazardous Wastes" in this section.

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| D001 ⁹ | Ignitable Characteristic Wastes, except for the §261.21(a)(1) High TOC Subcategory. | NA | NA | DEACT and meet §268.48 standards ⁸ ; or RORGS; or CMBST | DEACT and meet §268.48 standards ⁸ ; or RORGS; or CMBST |
| | High TOC Ignitable Characteristic Liquids Subcategory based on §261.21(a)(1) - 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 §268.48 standards ⁸ | DEACT and meet §268.48 standards ⁸ |
| D002, D004, D005, D006, D007, D008, D009, D010, D011 | Radioactive high level wastes generated during the reprocessing of fuel rods. (Note: This subcategory consists of nonwastewaters only.) | Corrosivity (pH) | NA | NA | HLVIT |
| | | Arsenic | 7440-38-2 | NA | HLVIT |
| | | Barium | 7440-39-3 | NA | HLVIT |
| | | Cadmium | 7440-43-9 | NA | HLVIT |
| | | Chromium (Total) | 7440-47-3 | NA | HLVIT |
| | | Lead | 7439-92-1 | NA | HLVIT |
| | | Mercury | 7439-97-6 | NA | HLVIT |
| | | Selenium | 7782-49-2 | NA | HLVIT |
| | | Silver | 7440-22-4 | NA | HLVIT |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|--|----------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| D003 ⁹ | Reactive Sulfides Subcategory based on §261.23(a)(5). | NA | NA | DEACT | DEACT |
| | Explosives Subcategory based on §261.23(a)(6), (7), and (8). | NA | NA | DEACT and meet §268.48 standards ⁸ | DEACT and meet 268.48 standards ⁸ |
| | Unexploded ordnance and other explosive devices which have been the subject of an emergency response. | NA | NA | DEACT | DEACT |
| | Other Reactives Subcategory based on §261.23(a)(1). | NA | NA | DEACT and meet §268.48 standards ⁸ | DEACT and meet §268.48 standards ⁸ |
| | Water Reactive Subcategory based on §261.23(a)(2), (3), and (4). (Note: This subcategory consists of nonwastewaters only.) | NA | NA | NA | DEACT and meet §268.48 standards ⁸ |
| | Reactive Cyanides Subcategory based on §261.23(a)(5). | Cyanides (Total) ⁷ | 57-12-5 | Reserved | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| 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 §268.48 standards ⁸ | 5.0 mg/l TCLP and meet §268.48 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 §268.48 standards ⁸ | 21 mg/l TCLP and meet §268.48 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 §268.48 standards ⁸ | 0.11 mg/l TCLP and meet §268.48 standards ⁸ |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | Cadmium Containing Batteries Subcategory. (Note: This subcategory consists of nonwastewaters only.) | Cadmium | 7440-43-9 | NA | RTHRM |
| 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 §268.48 standards ⁸ | 0.60 mg/l TCLP and meet §268.48 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 §268.48 standards ⁸ | 0.75 mg/l TCLP and meet §268.48 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 268 or exempted under other EPA regulations (see §266.80). 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 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|--|---------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| 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 §268.48 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 §268.48 standards ⁸ |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | All D009 wastewaters. | Mercury | 7439-97-6 | 0.15 and meet §268.48 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 |
| 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 §268.48 standards ⁸ | 5.7 mg/l TCLP and meet §268.48 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 §268.48 standards ⁸ | 0.14 mg/l TCLP and meet §268.48 standards ⁸ |
| D012 ⁹ | Wastes that are TC for Endrin based on the TCLP in SW846 Method 1311. | Endrin | 72-20-8 | BIODG; or CMBST | 0.13 and meet §268.48 standards ⁸ |
| | | Endrin aldehyde | 7421-93-4 | BIODG; or CMBST | 0.13 and meet §268.48 standards ⁸ |
| D013 ⁹ | Wastes that are TC for Lindane based on the TCLP in SW846 Method 1311. | alpha-BHC | 319-84-6 | CARBN; or CMBST | 0.066 and meet §268.48 standards ⁸ |
| | | beta-BHC | 319-85-7 | CARBN; or CMBST | 0.066 and meet §268.48 standards ⁸ |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|--|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | delta-BHC | 319-86-8 | CARBON; or CMBST | 0.066 and meet §268.48 standards ⁸ |
| | | gamma-BHC (Lindane) | 58-89-9 | CARBON; or CMBST | 0.066 and meet §268.48 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 §268.48 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 §268.48 standards ⁸ |
| D016 ⁹ | Wastes that are TC for 2,4-D (2,4-Dichlorophenoxyacetic acid) based on the TCLP in SW846 Method 1311. | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 94-75-7 | CHOXD, BIODG, or CMBST | 10 and meet §268.48 standards ⁸ |
| D017 ⁹ | Wastes that are TC for 2,4,5-TP (Silvex) based on the TCLP in SW846 Method 1311. | 2,4,5-TP (Silvex) | 93-72-1 | CHOXD or CMBST | 7.9 and meet §268.48 standards ⁸ |
| D018 ⁹ | Wastes that are TC for Benzene based on the TCLP in SW846 Method 1311. | Benzene | 71-43-2 | 0.14 and meet §268.48 standards ⁸ | 10 and meet §268.48 standards ⁸ |
| D019 ⁹ | Wastes that are TC for Carbon tetrachloride based on the TCLP in SW846 Method 1311. | Carbon tetrachloride | 56-23-5 | 0.057 and meet §268.48 standards ⁸ | 6.0 and meet §268.48 standards ⁸ |
| D020 ⁹ | Wastes that are TC for Chlordane based on the TCLP in SW846 Method 1311. | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 and meet §268.48 standards ⁸ | 0.26 and meet §268.48 standards ⁸ |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|-------------------|---|--|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| D021 ⁹ | Wastes that are TC for Chlorobenzene based on the TCLP in SW846 Method 1311. | Chlorobenzene | 108-90-7 | 0.057 and meet §268.48 standards ⁸ | 6.0 and meet §268.48 standards ⁸ |
| D022 ⁹ | Wastes that are TC for Chloroform based on the TCLP in SW846 Method 1311. | Chloroform | 67-66-3 | 0.046 and meet §268.48 standards ⁸ | 6.0 and meet §268.48 standards ⁸ |
| D023 ⁹ | Wastes that are TC for o-Cresol based on the TCLP in SW846 Method 1311. | o-Cresol | 95-48-7 | 0.11 and meet §268.48 standards ⁸ | 5.6 and meet §268.48 standards ⁸ |
| D024 ⁹ | Wastes that are TC for m-Cresol based on the TCLP in SW846 Method 1311. | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 and meet §268.48 standards ⁸ | 5.6 and meet §268.48 standards ⁸ |
| D025 ⁹ | Wastes that are TC for p-Cresol based on the TCLP in SW846 Method 1311. | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 and meet §268.48 standards ⁸ | 5.6 and meet §268.48 standards ⁸ |
| D026 ⁹ | Wastes that are TC for Cresols (Total) based on the TCLP in SW846 Method 1311. | Cresol-mixed isomers (Cresylic acid)(sum of o-, m-, and p-cresol concentrations) | 1319-77-3 | 0.88 and meet §268.48 standards ⁸ | 11.2 and meet §268.48 standards ⁸ |
| D027 ⁹ | Wastes that are TC for p-Dichlorobenzene based on the TCLP in SW846 Method 1311. | p-Dichlorobenzene (1,4-Dichlorobenzene) | 106-46-7 | 0.090 and meet §268.48 standards ⁸ | 6.0 and meet §268.48 standards ⁸ |
| D028 ⁹ | Wastes that are TC for 1,2-Dichloroethane based on the TCLP in SW846 Method 1311. | 1,2-Dichloroethane | 107-06-2 | 0.21 and meet §268.48 standards ⁸ | 6.0 and meet §268.48 standards ⁸ |
| D029 ⁹ | Wastes that are TC for 1,1-Dichloroethylene based on the TCLP in SW846 Method 1311. | 1,1-Dichloroethylene | 75-35-4 | 0.025 and meet §268.48 standards ⁸ | 6.0 and meet §268.48 standards ⁸ |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|--|---------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| D030 ⁹ | Wastes that are TC for 2,4-Dinitrotoluene based on the TCLP in SW846 Method 1311. | 2,4-Dinitrotoluene | 121-14-2 | 0.32 and meet §268.48 standards ⁸ | 140 and meet §268.48 standards ⁸ |
| D031 ⁹ | Wastes that are TC for Heptachlor based on the TCLP in SW846 Method 1311. | Heptachlor | 76-44-8 | 0.0012 and meet §268.48 standards ⁸ | 0.066 and meet §268.48 standards ⁸ |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 and meet §268.48 standards ⁸ | 0.066 and meet §268.48 standards ⁸ |
| D032 ⁹ | Wastes that are TC for Hexachlorobenzene based on the TCLP in SW846 Method 1311. | Hexachlorobenzene | 118-74-1 | 0.055 and meet §268.48 standards ⁸ | 10 and meet §268.48 standards ⁸ |
| D033 ⁹ | Wastes that are TC for Hexachlorobutadiene based on the TCLP in SW846 Method 1311. | Hexachlorobutadiene | 87-68-3 | 0.055 and meet §268.48 standards ⁸ | 5.6 and meet §268.48 standards ⁸ |
| D034 ⁹ | Wastes that are TC for Hexachloroethane based on the TCLP in SW846 Method 1311. | Hexachloroethane | 67-72-1 | 0.055 and meet §268.48 standards ⁸ | 30 and meet §268.48 standards ⁸ |
| D035 ⁹ | Wastes that are TC for Methyl ethyl ketone based on the TCLP in SW846 Method 1311. | Methyl ethyl ketone | 78-93-3 | 0.28 and meet §268.48 standards ⁸ | 36 and meet §268.48 standards ⁸ |
| D036 ⁹ | Wastes that are TC for Nitrobenzene based on the TCLP in SW846 Method 1311. | Nitrobenzene | 98-95-3 | 0.068 and meet §268.48 standards ⁸ | 14 and meet §268.48 standards ⁸ |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|-------------------|--|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| D037 ⁹ | Wastes that are TC for Pentachlorophenol based on the TCLP in SW846 Method 1311. | Pentachlorophenol | 87-86-5 | 0.089 and meet §268.48 standards ⁸ | 7.4 and meet §268.48 standards ⁸ |
| D038 ⁹ | Wastes that are TC for Pyridine based on the TCLP in SW846 Method 1311. | Pyridine | 110-86-1 | 0.014 and meet §268.48 standards ⁸ | 16 and meet §268.48 standards ⁸ |
| D039 ⁹ | Wastes that are TC for Tetrachloroethylene based on the TCLP in SW846 Method 1311. | Tetrachloroethylene | 127-18-4 | 0.056 and meet §268.48 standards ⁸ | 6.0 and meet §268.48 standards ⁸ |
| D040 ⁹ | Wastes that are TC for Trichloroethylene based on the TCLP in SW846 Method 1311. | Trichloroethylene | 79-01-6 | 0.054 and meet §268.48 standards ⁸ | 6.0 and meet §268.48 standards ⁸ |
| D041 ⁹ | Wastes that are TC for 2,4,5-Trichlorophenol based on the TCLP in SW846 Method 1311. | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 and meet §268.48 standards ⁸ | 7.4 and meet §268.48 standards ⁸ |
| D042 ⁹ | Wastes that are TC for 2,4,6-Trichlorophenol based on the TCLP in SW846 Method 1311. | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 and meet §268.48 standards ⁸ | 7.4 and meet §268.48 standards ⁸ |
| D043 ⁹ | Wastes that are TC for Vinyl chloride based on the TCLP in SW846 Method 1311. | Vinyl chloride | 75-01-4 | 0.27 and meet §268.48 standards ⁸ | 6.0 and meet §268.48 standards ⁸ |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|--|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| 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 §261.31 | 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 | 108-39-4 | 0.77 | 5.6 |
| | | (difficult to distinguish from p-cresol) | | | |
| | | p-Cresol | 106-44-5 | 0.77 | 5.6 |
| | | (difficult to distinguish from m-cresol) | | | |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|--|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 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 |
| | | Tetrachloroethylene | 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 |
| | | Trichloromonofluoromethane | 75-69-4 | 0.020 | 30 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|----------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | 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 §268.41(c)) | 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 |
| | | Cadmium | 7440-43-9 | NA | 0.11 mg/l TCLP |
| F007 | Spent cyanide plating bath solutions from electroplating operations. | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/l TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|----------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| F008 | Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process. | 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 |
| | | 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 |
| F009 | Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process. | Silver | 7440-22-4 | NA | 0.14 mg/l TCLP |
| | | 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 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|----------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| F012 | Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process. | 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 |
| | | Cadmium | 7440-43-9 | NA | 0.11 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 |
| | | 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 |
| | | 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 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| F020, F021, F022, F023, F026 | Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of: (1) tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives, excluding wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol (F020); (2) pentachlorophenol, or of intermediates used to produce its derivatives (i.e., F021); (3) tetra-, penta-, or hexachlorobenzenes under alkaline conditions (i.e., F022); and from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate, or component in a formulating process) of: (1) tri- or tetrachlorophenols, excluding wastes from equipment used only for the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol (F023); (2) tetra-, penta-, or hexachlorobenzenes under alkaline conditions (i.e., F026). | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|--|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | 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 §261.31 or §261.32.). | 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| 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 | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/l TCLP |
| | | 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 |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 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 | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | | | | |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|--|---|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 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 Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| F028 | Residues resulting from the incineration or thermal treatment of soil contaminated with EPA Hazardous Wastes Nos. F020, F021, F023, F026, and F027. | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|--|---|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code 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 §261.35 of these regulations 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)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(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 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | Fluorene | 86-73-7 | 0.059 | 3.4 |
| | | Hexachlorodibenzo-p-dioxins | NA | 0.000063, or CMBST ¹¹ | 0.001, or CMBST ¹¹ |
| | | Hexachlorodibenzofurans | 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 |
| | | Pentachlorodibenzo-p-dioxins | NA | 0.000063, or CMBST ¹¹ | 0.001, or CMBST ¹¹ |
| | | Pentachlorodibenzofurans | 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 |
| | | Tetrachlorodibenzo-p-dioxins | NA | 0.000063, or CMBST ¹¹ | 0.001, or CMBST ¹¹ |
| | | Tetrachlorodibenzofurans | 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 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| 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)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(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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|--|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| 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 §261.31(b)(2) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing. | 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 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|--|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code 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 |
| | | 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 |
| | | | | | |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| F038 | Petroleum refinery secondary (emulsified) oil/water/solids separation sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air floatation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in §261.31(b)(2) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological units) and F037, K048, and K051 are not included in this listing. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|--|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| F039 | Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under subpart D of this part. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028.). | 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 |
| | | Acenaphthylene | 208-96-8 | 0.059 | 3.4 |
| | | Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| | | Acetone | 67-64-1 | 0.28 | 160 |
| | | Acetonitrile | 75-05-8 | 5.6 | NA |
| | | Acetophenone | 96-86-2 | 0.010 | 9.7 |
| | | 2-Acetylaminofluorene | 53-96-3 | 0.059 | 140 |
| | | Acrolein | 107-02-8 | 0.29 | NA |
| | | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| F039 | Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under subpart D of this part. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/or F028.). | Aldrin | 309-00-2 | 0.021 | 0.066 |
| | | 4-Aminobiphenyl | 92-67-1 | 0.13 | NA |
| | | Aniline | 62-53-3 | 0.81 | 14 |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Aramite | 140-57-8 | 0.36 | NA |
| | | | | | |
| | | | | | |
| | | | | | |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 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)fluoranthene difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 1.8 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Bromodichloromethane | 75-27-4 | 0.35 | 15 |
| | | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | 4-Bromophenyl phenyl ether | 101-55-3 | 0.055 | 15 |
| | | n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |
| | | Butyl benzyl phthalate | 85-68-7 | 0.017 | 28 |
| | | 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | 88-85-7 | 0.066 | 2.5 |
| | | Carbon disulfide | 75-15-0 | 3.8 | NA |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| | | p-Chloroaniline | 106-47-8 | 0.46 | 16 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chlorobenzilate | 510-15-6 | 0.10 | NA |
| | | 2-Chloro-1,3-butadiene | 126-99-8 | 0.057 | NA |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|--|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | Chlorodibromomethane | 124-48-1 | 0.057 | 15 |
| | | Chloroethane | 75-00-3 | 0.27 | 6.0 |
| | | bis(2-hloroethoxy)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- | 0.055 | 7.2 |
| | | p-Chloro-m-cresol | 59-50-7 | 0.018 | 14 |
| | | Chloromethane (Methyl chloride) | 74-87-3 | 0.19 | 30 |
| | | 2-Chloronaphthalene | 91-58-7 | 0.055 | 5.6 |
| | | 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| | | 3-Chloropropylene | 107-05-1 | 0.036 | 30 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol | 108-39-4 | 0.77 | 5.6 |
| | | (difficult to distinguish from p-cresol) | | | |
| | | p-Cresol | 106-44-5 | 0.77 | 5.6 |
| | | (difficult to distinguish from m-cresol) | | | |
| | | Cyclohexanone | 108-94-1 | 0.36 | NA |
| | | 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.11 | 15 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| | | Dibromomethane | 74-95-3 | 0.11 | 15 |
| | | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 94-75-7 | 0.72 | 10 |
| | | o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| | | p,p'-DDD | 72-54-8 | 0.023 | 0.087 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 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 |
| | | 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 |
| | | 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-Dimethyl phenol | 105-67-9 | 0.036 | 14 |
| | | Dimethyl phthalate | 131-11-3 | 0.047 | 28 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | 1,4-Dinitrobenzene | 100-25-4 | 0.32 | 2.3 |
| | | 4,6-Dinitro-o-cresol | 534-52-1 | 0.28 | 160 |
| | | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| | | 2,4-Dinitrotoluene | 121-14-2 | 0.32 | 140 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 28 |
| | | Di-n-octyl phthalate | 117-84-0 | 0.017 | 28 |
| | | Di-n-propylnitrosamine | 621-64-7 | 0.40 | 14 |
| | | 1,4-Dioxane | 123-91-1 | 12.0 | 170 |
| | | Diphenylamine (difficult to distinguish from diphenylnitrosamine) | 122-39-4 | 0.92 | NA |
| | | Diphenylnitrosamine (difficult to distinguish from diphenylamine) | 86-30-6 | 0.92 | NA |
| | | 1,2-Diphenylhydrazine | 122-66-7 | 0.087 | NA |
| | | Disulfoton | 298-04-4 | 0.017 | 6.2 |
| | | Endosulfan I | 939-98-8 | 0.023 | 0.066 |
| | | Endosulfan II | 33213-6-5 | 0.029 | 0.13 |
| | | Endosulfan sulfate | 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|--|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 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 | 143-50-8 | 0.0011 | 0.13 |
| | | Methacrylonitrile | 126-98-7 | 0.24 | 84 |
| | | Methanol | 67-56-1 | 5.6 | NA |
| | | Methapyrilene | 91-80-5 | 0.081 | 1.5 |
| | | Methoxychlor | 72-43-5 | 0.25 | 0.18 |
| | | 3-Methylcholanthrene | 56-49-5 | 0.0055 | 15 |
| | | 4,4-Methylene bis(2-chloroaniline) | 101-14-4 | 0.50 | 30 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| | | Methyl methacrylate | 80-62-6 | 0.14 | 160 |
| | | Methyl methansulfonate | 66-27-3 | 0.018 | NA |
| | | Methyl parathion | 298-00-0 | 0.014 | 4.6 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 2-Naphthylamine | 91-59-8 | 0.52 | NA |
| | | p-Nitroaniline | 100-01-6 | 0.028 | 28 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | 5-Nitro-o-toluidine | 99-55-8 | 0.32 | 28 |
| | | p-Nitrophenol | 100-02-7 | 0.12 | 29 |
| | | N-Nitrosodiethylamine | 55-18-5 | 0.40 | 28 |
| | | N-Nitrosodimethylamine | 62-75-9 | 0.40 | NA |
| | | 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 |
| | | Parathion | 56-38-2 | 0.014 | 4.6 |
| | | Total PCBs (sum of all PCB isomers, or all Aroclors) | 1336-36-3 | 0.10 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | 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 |
| | | Phorate | 298-02-2 | 0.021 | 4.6 |
| | | Phthalic anhydride | 85-44-9 | 0.055 | NA |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|--|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | Pronamide | 23950-58-5 | 0.093 | 1.5 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Pyridine | 110-86-1 | 0.014 | 16 |
| | | Safrole | 94-59-7 | 0.081 | 22 |
| | | Silvex (2,4,5-TP) | 93-72-1 | 0.72 | 7.9 |
| | | 2,4,5-T | 93-76-5 | 0.72 | 7.9 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| | | Bromoform (Tribromomethane) | 75-25-2 | 0.63 | 15 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| | | Trichloromonofluoromethane | 75-69-4 | 0.020 | 30 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 1,2,3-Trichloropropane | 96-18-4 | 0.85 | 30 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|--|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 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- | 35 | NA |
| | | Lead | 439-92-1 | 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|--|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| K008 | Oven residue from the production of chrome oxide green pigments. | Lead | 7439-92-1 | 0.69 | 0.75 mg/l TCLP |
| | | 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 | 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | 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. | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| K017 | Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin. | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| | | 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |
| | | 1,2,3-Trichloropropane | 96-18-4 | 0.85 | 30 |
| K018 | Heavy ends from the fractionation column in ethyl chloride production. | Chloroethane | 75-00-3 | 0.27 | 6.0 |
| | | Chloromethane | 74-87-3 | 0.19 | NA |
| | | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Pentachloroethane | 76-01-7 | NA | 6.0 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|--|---|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| 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-Tetrachlorobenzene | 95-94-3 | 0.055 | NA |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| K020 | Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production. | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| 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 diphenylnitrosamine) | 122-39-4 | 0.92 | 13 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|--|---|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | Diphenylnitrosamine (difficult to distinguish from diphenylamine) | 86-30-6 | 0.92 | 13 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 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 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Pentachloroethane | 76-01-7 | NA | 6.0 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|--|---------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Cadmium | 7440-43-9 | 0.69 | NA |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 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 |
| | | Hexachloropropylene | 1888-71-7 | NA | 30 |
| | | Pentachlorobenzene | 608-93-5 | NA | 10 |
| | | Pentachloroethane | 76-01-7 | NA | 6.0 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| K031 | By-product salts generated in the production of MSMA and cacodylic acid. | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| K032 | Wastewater treatment sludge from the production of chlordane. | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|--|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code 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 |
| | | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| K033 | Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane. | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| K034 | Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane. | Hexachlorocyclopentadiene | 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)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol | 108-39-4 | 0.77 | 5.6 |
| | | (difficult to distinguish from p-cresol) | | | |
| | | p-Cresol | 106-44-5 | 0.77 | 5.6 |
| | | (difficult to distinguish from m-cresol) | | | |
| | | 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 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 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-Tetrachlorobenzene | 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-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|--|---|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 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 Tetrachlorodibenzofurans) | 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 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|--|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code 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 |
| | | 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 |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| K049 | Slop oil emulsion solids 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 |
| | | Carbon disulfide | 75-15-0 | 3.8 | NA |
| | | Chrysene | 2218-01-9 | 0.059 | 3.4 |
| | | 2,4-Dimethylphenol | 105-67-9 | 0.036 | NA |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | | | | |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|--|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 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)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 2218-01-9 | 0.059 | 3.4 |
| | | Di-n-butyl phthalate | 105-67-9 | 0.057 | 28 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.08 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|--|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| K052 | Tank bottoms (leaded) from the petroleum refining industry. | 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 |
| | | 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 | 108-39-4 | 0.77 | 5.6 |
| | | (difficult to distinguish from p-cresol) | | | |
| | | p-Cresol | 106-44-5 | 0.77 | 5.6 |
| | | (difficult to distinguish from m-cresol) | | | |
| | | 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 | 1330-20-7 | 0.32 | 30 |
| | | (sum of o-, m-, and p-xylene concentrations) | | | |
| | | 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| 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 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | 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 |
| | | Tetrachloroethylene | 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 diphenylnitrosamine) | 122-39-4 | 0.92 | 13 |
| | | Diphenylnitrosamine (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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 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 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Total PCBs (sum of all PCB isomers, or all Aroclors) | 1336-36-3 | 0.10 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| K086 | Solvent wastes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps, and 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 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|--|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 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 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|--|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | 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 |
| | | Benzo(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene | 207-08-9 | 0.11 | 6.8 |
| | | Benzo(g, h, i)perylene | 191-24-2 | 0.0055 | 1.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| | | Indeno(1,2,3,-c,d)pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | 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 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|--|---|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | Arsenic | 7440-38-2 | 1.4 | 26.1 |
| | | 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 | 0.11 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 |
| | | Cyanide (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanide (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Fluoride | 16984-48-8 | 35 | N.A. |
| 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|--|---|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| K094 | Distillation bottoms from the production of phthalic anhydride from ortho-xylene. | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| K095 | Distillation bottoms from the production of 1,1,1-trichloroethane. | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Pentachloroethane | 76-01-7 | 0.055 | 6.0 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| K096 | Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane. | m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| | | Pentachloroethane | 76-01-7 | 0.055 | 6.0 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| K097 | Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane. | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 6.0 |
| | | Heptachlor | 76-44-8 | 0.0012 | 19 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|--|---|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| K098 | Untreated process wastewater from the production of toxaphene. | Heptachlor epoxide | 1024-57-3 | 0.016 | 6.0 |
| | | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 6.0 |
| | | Toxaphene | 8001-35-2 | 0.0095 | 0.26 |
| K099 | Untreated wastewater from the production of 2,4-D. | 2,4-Dichlorophenoxyacetic acid | 94-75-7 | 0.72 | 0.066 |
| | | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.066 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 2.4 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 2.6 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 10 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | 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 | 0.001 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.001 |
| | | Lead | 7439-92-1 | 0.69 | 0.001 |
| 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 | 0.001 |
| | | Arsenic | 7440-38-2 | 1.4 | 0.11 mg/l TCLP |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| K102 | Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | Cadmium | 7440-43-9 | 0.69 | 0.60 mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/l TCLP |
| | | Mercury | 7439-97-6 | 0.15 | 14 |
| | | o-Nitrophenol | 88-75-5 | 0.028 | 5.0 mg/l TCLP |
| | | Arsenic | 7440-38-2 | 1.4 | NA |
| K103 | Process residues from aniline extraction from the production of aniline. | Cadmium | 7440-43-9 | 0.69 | NA |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Mercury | 7439-97-6 | 0.15 | 13 |
| | | Aniline | 62-53-3 | 0.81 | 5.0 mg/l TCLP |
| | | Benzene | 71-43-2 | 0.14 | NA |
| K104 | Combined wastewater streams generated from nitrobenzene/ aniline production. | 2,4-Dinitrophenol | 51-28-5 | 0.12 | NA |
| | | Nitrobenzene | 98-95-3 | 0.068 | NA |
| | | Phenol | 108-95-2 | 0.039 | 14 |
| | | Aniline | 62-53-3 | 0.81 | 10 |
| | | Benzene | 71-43-2 | 0.14 | 160 |
| K105 | Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes. | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 14 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 6.2 |
| | | Phenol | 108-95-2 | 0.039 | 14 |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 10 |
| | | Benzene | 71-43-2 | 0.14 | 160 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 14 |
| | | 2-Chlorophenol | 95-57-8 | 0.044 | 6.2 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 590 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 10 |
| | | Phenol | 108-95-2 | 0.039 | 6.0 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 5.7 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 6.0 |
| 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 | 6.0 |
| | 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 | 6.2 |
| | Other K106 nonwastewaters that contain less than 260 mg/kg total mercury and are not residues from RMERC. | Mercury | 7439-97-6 | NA | 7.4 |
| | All K106 wastewaters. | Mercury | 7439-97-6 | 0.15 | 7.4 |
| 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 | RMERC |
| 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 | 0.20 mg/l TCLP |
| 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 | 0.025 mg/l TCLP |
| 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 | NA |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|--|--|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| K111 | Product washwaters from the production of dinitrotoluene via nitration of toluene | 2,4-Dinitrotoluene | 121-1-2 | 0.32 | CMBST |
| | | 2,6-Dinitrotoluene | 606-20-2 | 0.55 | CMBST |
| 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 | CARBON; OR CMBST | CMBST |
| K114 | Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | NA | NA | CARBON; or CMBST | 140 |
| K115 | Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | Nickel | 7440-02-0 | 3.98 | 28 |
| | | NA | NA | CARBON; or CMBST | CMBST |
| K116 | Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine. | NA | NA | CARBON; 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 | CMBST |
| | | Chloroform | 67-66-3 | 0.046 | 11 mg/l TCLP |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | CMBST |
| 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 | CMBST |
| | | Chloroform | 67-66-3 | 0.046 | 15 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|--|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 6.0 |
| K123 | Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenedisulfoncarbamate acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | 15 |
| K124 | Reactor vent scrubber water from the production of ethylenedisulfoncarbamate acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | 15 |
| K125 | Filtration, evaporation, and centrifugation solids from the production of ethylenedisulfoncarbamate acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | 6.0 |
| K126 | Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenedisulfoncarbamate acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | 15 |
| 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 | CMBST |
| K132 | Spent absorbent and wastewater separator solids from the production of methyl bromide. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | CMBST |
| 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 | CMBST |
| | | Chloroform | 67-66-3 | 0.046 | CMBST |
| | | 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 | Benzene | 71-43-2 | 0.14 | 15 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|--|---|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | coal. This listing does not include K087 (decanter tank tar sludge from coking operations). | | | | |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 6.0 |
| | | Benzo(a)pyrene | 50-2-8 | 0.061 | 15 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 7.4 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 10 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 3.4 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 6.8 |
| 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 | 6.8 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 8.2 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 3.4 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 10 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 3.4 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 6.8 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code 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 | 6.8 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 8.2 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 3.4 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 10 |
| | | 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 | 3.4 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 6.8 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 6.8 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 3.4 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 10 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 3.4 |
| K145 | Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 6.8 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|--|---|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| K147 | Tar storage tank residues from coal tar refining. | Benz(a)anthracene | 56-55-3 | 0.059 | 6.8 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Chrysene | 218-01-9 | 0.059 | 8.2 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 10 |
| | | Naphthalene | 91-20-3 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 3.4 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 8.2 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 5.6 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 10 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 3.4 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 6.8 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 6.8 |
| K148 | Residues from coal tar distillation, including, but not limited to, still bottoms. | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 8.2 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 3.4 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 3.4 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 6.8 |
| | | | | | |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code 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 | 6.8 |
| | | Chloroform | 67-66-3 | 0.046 | 3.4 |
| | | Chloromethane | 74-87-3 | 0.19 | 8.2 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 3.4 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 6.0 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 6.0 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 30 |
| 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. | Toluene | 108-88-3 | 0.080 | 6.0 |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 10 |
| | | Chloroform | 67-66-3 | 0.046 | 10 |
| | | Chloromethane | 74-87-3 | 0.19 | 14 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 10 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 6.0 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 6.0 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 30 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 10 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 10 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| 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 | 14 |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 19 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| K156 | Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes. | Acetonitrile | 75-05-8 | 5.6 | 10 |
| | | Acetophenone | 96-86-2 | 0.010 | 14 |
| | | Aniline | 62-53-3 | 0.81 | 6.0 |
| | | Benomyl | 17804-35-2 | 0.056 | 10 |
| | | Benzene | 71-43-2 | 0.14 | 1.8 |
| | | Carbaryl | 63-25-2 | 0.006 | 9.7 |
| | | Carbenzadim | 10605-21-7 | 0.056 | 14 |
| | | Carbofuran | 1563-66-2 | 0.006 | 1.4 |
| | | Carbosulfan | 55285-14-8 | 0.028 | 10 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 0.14 |
| | | Chloroform | 67-66-3 | 0.046 | 1.4 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 0.14 |
| | | Methomyl | 16752-77-5 | 0.028 | 1.4 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|--|---------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | Methylene chloride | 75-09-2 | 0.089 | 6.0 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 6.0 |
| | | Naphthalene | 91-20-3 | 0.059 | 6.0 |
| | | Phenol | 108-95-2 | 0.039 | 0.14 |
| | | Pyridine | 110-86-1 | 0.014 | 30 |
| | | Toluene | 108-88-3 | 0.080 | 36 |
| | | Triethylamine | 121-44-8 | 0.081 | 5.6 |
| K157 | Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. | Carbon tetrachloride | 56-23-5 | 0.057 | 6.2 |
| | | Chloroform | 67-66-3 | 0.046 | 16 |
| | | Chloromethane | 74-87-3 | 0.19 | 10 |
| | | Methomyl | 16752-77-5 | 0.028 | 1.5 |
| | | Methylene chloride | 75-09-2 | 0.089 | 6.0 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 6.0 |
| | | Pyridine | 110-86-1 | 0.014 | 30 |
| | | Triethylamine | 121-44-8 | 0.081 | 0.14 |
| K158 | Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes. | Benomyl | 17804-35-2 | 0.056 | 30 |
| | | Benzene | 71-43-2 | 0.14 | 36 |
| | | Carbenzadim | 10605-21-7 | 0.056 | 16 |
| | | Carbofuran | 1563-66-2 | 0.006 | 1.5 |
| | | Carbosulfan | 55285-14-8 | 0.028 | 1.4 |
| | | Chloroform | 67-66-3 | 0.046 | 10 |
| | | Methylene chloride | 75-09-2 | 0.089 | 1.4 |
| | | Phenol | 108-95-2 | 0.039 | 0.14 |
| K159 | Organics from the treatment of thiocarbamate wastes. | Benzene | 71-43-2 | 0.14 | 1.4 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | Butylate | 2008-41-5 | 0.042 | 6.0 |
| | | EPTC (Eptam) | 759-94-4 | 0.042 | 30 |
| | | Molinate | 2212-67-1 | 0.042 | 6.2 |
| | | Pebulate | 1114-71-2 | 0.042 | 10 |
| | | 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 | 1.4 |
| | | Arsenic | 7440-38-2 | 1.4 | 1.4 |
| | | Carbon disulfide | 75-15-0 | 3.8 | 1.4 |
| | | Dithiocarbamates (total) | NA | 0.028 | 1.4 |
| | | Lead | 7439-92-1 | 0.69 | 1.15 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 mg/l TCLP |
| | | Selenium | 7782-49-2 | 0.82 | 4.8 mg/l TCLP |
| K169 | Crude oil tank sediment from petroleum refining operations. | Benz(a)anthracene | 56-55-3 | 0.059 | 28 |
| | | Benzene | 71-43-2 | 0.14 | 0.75 mg/l TCLP |
| | | Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 11 mg/l TCLP |
| | | Chrysene | 218-01-9 | 0.059 | 5.7 mg/l TCLP |
| | | Ethyl benzene | 100-41-4 | 0.057 | 3.4 |
| | | Fluorene | 86-73-7 | 0.059 | 10 |
| | | Naphthalene | 91-20-3 | 0.059 | 1.8 |
| | | Phenanthrene | 81-05-8 | 0.059 | 3.4 |
| | | Pyrene | 129-00-0 | 0.067 | 10 |
| | | Toluene (Methyl Benzene) | 108-88-3 | 0.080 | 3.4 |
| | | Xylene(s) (Total) | 1330-20-7 | 0.32 | 5.6 |
| K170 | Clarified slurry oil sediment from petroleum refining operations. | Benz(a)anthracene | 56-55-3 | 0.059 | 5.6 |
| | | Benzene | 71-43-2 | 0.14 | 8.2 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|--|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 10 |
| | | Chrysene | 218-01-9 | 0.059 | 30 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 3.4 |
| | | Ethyl benzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | 1.8 |
| | | Indeno(1,2,3,-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 8.2 |
| | | Phenanthrene | 81-05-8 | 0.059 | 10 |
| | | Pyrene | 129-00-0 | 0.067 | 3.4 |
| | | Toluene (Methyl Benzene) | 108-88-3 | 0.080 | 3.4 |
| | | Xylene(s) (Total) | 1330-20-7 | 0.32 | 5.6 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 5.6 |
| K171 | Spent hydrotreating 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 | 8.2 |
| | | Chrysene | 218-01-9 | 0.059 | 10 |
| | | Ethyl Benzene | 100-41-4 | 0.057 | 30 |
| | | Naphthalene | 91-20-3 | 0.059 | 3.4 |
| | | Phenanthrene | 81-05-8 | 0.059 | 10 |
| | | Pyrene | 129-00-0 | 0.067 | 3.4 |
| | | Toluene (Methyl Benzene) | 108-88-3 | 0.080 | 10 |
| | | Xylene(s) (Total) | 1330-20-7 | 0.32 | 5.6 |
| | | Arsenic | 7740-38-2 | 1.4 | 5.6 |
| | | Nickel | 7440-02-0 | 3.98 | 8.2 |
| | | Vanadium | 7440-62-2 | 4.3 | 10 |
| | | Benzene | 71-43-2 | 0.14 | 30 |
| 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.) | | | | |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | Ethyl Benzene | 100-41-4 | 0.057 | 5 mg/L TCLP |
| | | Toluene (Methyl Benzene) | 108-88-3 | 0.080 | 11.0 mg/L TCLP |
| | | Xylene(s) (Total) | 1330-20-7 | 0.32 | 1.6 mg/L TCLP |
| | | Antimony | 7740-36-0 | 1.9 | 10 |
| | | Arsenic | 7740-38-2 | 1.4 | 10 |
| | | Nickel | 7440-02-0 | 3.98 | 10 |
| | | Vanadium | 7440-62-2 | 4.3 | 30 |
| | | Reactive sulfides | NA | DEACT | 1.15 mg/L TCLP |
| P001 | Warfarin, & salts, when present at concentrations greater than 0.3% | Warfarin | 81-81-2 | (WETOX or CHOXD) fb CARBN; or CMBST | 5 mg/L TCLP |
| P002 | 1-Acetyl-2-thiourea | 1-Acetyl-2-thiourea | 591-08-2 | (WETOX or CHOXD) fb CARBN; or CMBST | 11.0 mg/L TCLP |
| P003 | Acrolein | Acrolein | 107-02-8 | 0.29 | 1.6 mg/L TCLP |
| P004 | Aldrin | Aldrin | 309-00-2 | 0.021 | DEACT |
| 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 | 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 | 0.066 |
| P009 | Ammonium picrate | Ammonium picrate | 131-74-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CMBST |
| P010 | Arsenic acid | Arsenic | 7440-38-2 | 1.4 | CHOXD; CHRED; or |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | | | | CMBST |
| P011 | Arsenic pentoxide | Arsenic | 7440-38-2 | 1.4 | CMBST |
| P012 | Arsenic trioxide | Arsenic | 7440-38-2 | 1.4 | CMBST |
| P013 | Barium cyanide | Barium | 7440-39-3 | NA | CHOXD; CHRED; or CMBST |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 5.0 mg/l TCLP |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 5.0 mg/l TCLP |
| P014 | Thiophenol (Benzene thiol) | Thiophenol (Benzene thiol) | 108-98-5 | (WETOX or CHOXD) fb CARBN; or CMBST | 5.0 mg/l TCLP |
| P015 | Beryllium dust | Beryllium | 7440-41-7 | RMETL; or RTHRM | 21 mg/l TCLP |
| P016 | Dichloromethyl ether (Bis(chloromethyl)ether) | Dichloromethyl ether | 542-88-1 | (WETOX or CHOXD) fb CARBN; or CMBST | 590 |
| P017 | Bromoacetone | Bromoacetone | 598-31-2 | (WETOX or CHOXD) fb CARBN; or CMBST | 30 |
| 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 | RMETL; or RTHRM |
| P021 | Calcium cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | CMBST |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | CMBST |
| P022 | Carbon disulfide | Carbon disulfide | 75-15-0 | 3.8 | CMBST |
| | | Carbon disulfide; alternate ⁶ standard for nonwastewaters only | 75-15-0 | NA | 2.5 |
| P023 | Chloroacetaldehyde | Chloroacetaldehyde | 107-20-0 | (WETOX or CHOXD) | 590 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|--|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | | | fb CARBN; or CMBST | |
| P024 | p-Chloroaniline | p-Chloroaniline | 106-47-8 | 0.46 | 30 |
| 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 | 4.8 mg/l TCLP |
| 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 | 16 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | CMBST |
| P030 | Cyanides (soluble salts and complexes) | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | CMBST |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | CMBST |
| P031 | Cyanogen | Cyanogen | 460-19-5 | CHOXD; WETOX; or CMBST | 590 |
| P033 | Cyanogen chloride | Cyanogen chloride | 506-77-4 | CHOXD; WETOX; or CMBST | 30 |
| P034 | 2-Cyclohexyl-4,6-dinitrophenol | 2-Cyclohexyl-4,6-dinitrophenol | 131-89-5 | (WETOX or CHOXD) fb CARBN; or CMBST | 590 |
| P036 | Dichlorophenylarsine | Arsenic | 7440-38-2 | 1.4 | 30 |
| P037 | Dieldrin | Dieldrin | 60-57-1 | 0.017 | CHOXD; WETOX; or CMBST |
| P038 | Diethylarsine | Arsenic | 7440-38-2 | 1.4 | CHOXD; WETOX; or CMBST |
| P039 | Disulfoton | Disulfoton | 298-04-4 | 0.017 | CMBST |
| P040 | O,O-Diethyl O-pyrazinyl phosphorothioate | O,O-Diethyl O-pyrazinyl phosphorothioate | 297-97-2 | CARBN; or CMBST | 5.0 mg/l TCLP |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|-------------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| P041 | Diethyl-p-nitrophenyl phosphate | Diethyl-p-nitrophenyl phosphate | 311-45-5 | CARBN; or CMBST | 0.13 |
| P042 | Epinephrine | Epinephrine | 51-43-4 | (WETOX or CHOXD) fb CARBN; or CMBST | 5.0 mg/l TCLP |
| P043 | Diisopropylfluorophosphate (DFP) | Diisopropylfluorophosphate (DFP) | 55-91-4 | CARBN; or CMBST | 6.2 |
| P044 | Dimethoate | Dimethoate | 60-51-5 | CARBN; or CMBST | CMBST |
| P045 | Thiofanox | Thiofanox | 39196-18-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P046 | alpha, alpha-Dimethylphenethylamine | alpha, alpha-Dimethylphenethylamine | 122-09-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P047 | 4,6-Dinitro-o-cresol | 4,6-Dinitro-o-cresol | 543-52-1 | 0.28 | CMBST |
| | 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 | CMBST |
| P049 | Dithiobiuret | Dithiobiuret | 541-53-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P050 | Endosulfan | Endosulfan I | 939-98-8 | 0.023 | 160 |
| | | Endosulfan II | 33213-6-5 | 0.029 | CMBST |
| | | Endosulfan sulfate | 1031-07-8 | 0.029 | 160 |
| P051 | Endrin | Endrin | 72-20-8 | 0.0028 | CMBST |
| | | Endrin aldehyde | 7421-93-4 | 0.025 | 0.066 |
| P054 | Aziridine | Aziridine | 151-56-4 | (WETOX or CHOXD) fb CARBN; or CMBST | 0.13 |
| P056 | Fluorine | Fluoride (measured in | 16964-48-8 | 35 | 0.13 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|----------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | wastewaters only) | | | |
| P057 | Fluoroacetamide | Fluoroacetamide | 640-19-7 | (WETOX or CHOXD) fb CARBN; or CMBST | 0.13 |
| P058 | Fluoroacetic acid, sodium salt | Fluoroacetic acid, sodium salt | 62-74-8 | (WETOX or CHOXD) fb CARBN; or CMBST | 0.13 |
| P059 | Heptachlor | Heptachlor | 76-44-8 | 0.0012 | CMBST |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | ADGAS fb NEUTR |
| P060 | Isodrin | Isodrin | 465-73-6 | 0.021 | CMBST |
| P062 | Hexaethyl tetraphosphate | Hexaethyl tetraphosphate | 757-58-4 | CARBN; or CMBST | CMBST |
| P063 | Hydrogen cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 0.066 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 0.066 |
| P064 | Isocyanic acid, ethyl ester | Isocyanic acid, ethyl ester | 624-83-9 | (WETOX or CHOXD) fb CARBN; or CMBST | 0.066 |
| 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 | CMBST |
| | 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 | 590 |
| | Mercury fulminate nonwastewaters that are residues from RMERC and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 30 |
| | Mercury fulminate nonwastewaters that are incinerator residues and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | CMBST |
| | All mercury fulminate wastewaters. | Mercury | 7439-97-6 | 0.15 | IMERC |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|----------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| P066 | Methomyl | Methomyl | 16752-77-5 | (WETOX or CHOXD) fb CARBN; or CMBST | RMERC |
| P067 | 2-Methyl-aziridine | 2-Methyl-aziridine | 75-55-8 | (WETOX or CHOXD) fb CARBN; or CMBST | 0.20 mg/l TCLP |
| P068 | Methyl hydrazine | Methyl hydrazine | 60-34-4 | CHOXD; CHRED; CARBN; BIODG; or CMBST | 0.025 mg/l TCLP |
| P069 | 2-Methylactonitrile | 2-Methylactonitrile | 75-86-5 | (WETOX or CHOXD) fb CARBN; or CMBST | NA |
| P070 | Aldicarb | Aldicarb | 116-06-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P071 | Methyl parathion | Methyl parathion | 298-00-0 | 0.014 | CMBST |
| P072 | 1-Naphthyl-2-thiourea | 1-Naphthyl-2-thiourea | 86-88-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CHOXD; CHRED; or CMBST |
| P073 | Nickel carbonyl | Nickel | 7440-02-0 | 3.98 | CMBST |
| P074 | Nickel cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | CMBST |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 4.6 |
| | | Nickel | 7440-02-0 | 3.98 | CMBST |
| P075 | Nicotine and salts | Nicotine and salts | 54-11-5 | (WETOX or CHOXD) fb CARBN; or CMBST | 11 mg/l TCLP |
| P076 | Nitric oxide | Nitric oxide | 10102-43-9 | ADGAS | 590 |
| P077 | p-Nitroaniline | p-Nitroaniline | 100-01-6 | 0.028 | 30 |
| P078 | Nitrogen dioxide | Nitrogen dioxide | 10102-44-0 | ADGAS | 11 mg/l TCLP |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| P081 | Nitroglycerin | Nitroglycerin | 55-63-0 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CMBST |
| P082 | N-Nitrosodimethylamine | N-Nitrosodimethylamine | 62-75-9 | 0.40 | ADGAS |
| P084 | N-Nitrosomethylvinylamine | N-Nitrosomethylvinylamine | 4549-40-0 | (WETOX or CHOXD) fb CARBN; or CMBST | 28 |
| P085 | Octamethylpyrophosphoramide | Octamethylpyrophosphoramide | 152-16-9 | CARBN; or CMBST | ADGAS |
| P087 | Osmium tetroxide | Osmium tetroxide | 20816-12-0 | RMETL; or RTHRM | CHOXD; CHRED; or CMBST |
| P088 | Endothall | Endothall | 145-73-3 | (WETOX or CHOXD) fb CARBN; or CMBST | 2.3 |
| P089 | Parathion | Parathion | 56-38-2 | 0.014 | CMBST |
| | | | | | CMBST |
| 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 | RMETL; or RTHRM |
| | 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 | CMBST |
| | Phenyl mercuric acetate nonwastewaters that are residues from RMERC and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 4.6 |
| | Phenyl mercuric acetate nonwastewaters that are incinerator residues and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | |
| | All phenyl mercuric acetate wastewaters. | Mercury | 7439-97-6 | 0.15 | IMERC; or RMERC |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|----------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| P093 | Phenylthiourea | Phenylthiourea | 103-85-5 | (WETOX or CHOXD) fb CARBN; or CMBST | RMERC |
| P094 | Phorate | Phorate | 298-02-2 | 0.021 | 0.20 mg/l TCLP |
| P095 | Phosgene | Phosgene | 75-44-5 | (WETOX or CHOXD) fb CARBN; or CMBST | 0.025 mg/l TCLP |
| P096 | Phosphine | Phosphine | 7803-51-2 | CHOXD; CHRED; or CMBST | NA |
| P097 | Famphur | Famphur | 52-85-7 | 0.017 | CMBST |
| P098 | Potassium cyanide. | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 4.6 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | CMBST |
| P099 | Potassium silver cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | CHOXD; CHRED; or CMBST |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 15 |
| | | Silver | 7440-22-4 | 0.43 | 590 |
| P101 | Ethyl cyanide (Propanenitrile) | Ethyl cyanide (Propanenitrile) | 107-12-0 | 0.24 | 30 |
| P102 | Propargyl alcohol | Propargyl alcohol | 107-19-7 | (WETOX or CHOXD) fb CARBN; or CMBST | 590 |
| P103 | Selenourea | Selenium | 7782-49-2 | 0.82 | 30 |
| P104 | Silver cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 0.14 mg/l TCLP |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 360 |
| | | Silver | 7440-22-4 | 0.43 | CMBST |
| P105 | Sodium azide | Sodium azide | 26628-22-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | 5.7 mg/l TCLP |
| P106 | Sodium cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| P108 | Strychnine and salts | Strychnine and salts | 57-24-9 | (WETOX or CHOXD) fb CARBN; or CMBST | 0.14 mg/l TCLP |
| P109 | Tetraethyldithiopyrophosphate | Tetraethyldithiopyrophosphate | 3689-24-5 | CARBN; or CMBST | CHOXD; CHRED; or CMBST |
| P110 | Tetraethyl lead | Lead | 7439-92-1 | 0.69 | 590 |
| P111 | Tetraethylpyrophosphate | Tetraethylpyrophosphate | 107-49-3 | CARBN; or CMBST | 30 |
| P112 | Tetranitromethane | Tetranitromethane | 509-14-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CMBST |
| P113 | Thallic oxide | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | CMBST |
| P114 | Thallium selenite | Selenium | 7782-49-2 | 0.82 | 0.75 mg/l TCLP |
| P115 | Thallium (I) sulfate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | CMBST |
| P116 | Thiosemicarbazide | Thiosemicarbazide | 79-19-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CHOXD; CHRED; or CMBST |
| P118 | Trichloromethanethiol | Trichloromethanethiol | 75-70-7 | (WETOX or CHOXD) fb CARBN; or CMBST | RTHRM; or STABL |
| P119 | Ammonium vanadate | Vanadium (measured in wastewaters only) | 7440-62-2 | 4.3 | 5.7 mg/l TCLP |
| P120 | Vanadium pentoxide | Vanadium (measured in wastewaters only) | 7440-62-2 | 4.3 | RTHRM; or STABL |
| P121 | Zinc cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | CMBST |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | CMBST |
| P122 | Zinc phosphide Zn ₃ P ₂ , when present at concentrations greater than 10% | Zinc Phosphide | 1314-84-7 | CHOXD; CHRED; or CMBST | STABL |
| P123 | Toxaphene | Toxaphene | 8001-35-2 | 0.0095 | STABL |
| P127 | Carbofuran | Carbofuran | 1563-66-2 | 0.006 | 590 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| P128 | Mexacarbate | Mexacarbate | 315-18-4 | 0.056 | 30 |
| P185 | Tirpate ¹⁰ | Tirpate | 26419-73-8 | 0.056 | CHOXD; CHRED; or CMBST |
| P188 | Physostigmine salicylate | Physostigmine salicylate | 57-64-7 | 0.056 | 2.6 |
| P189 | Carbosulfan | Carbosulfan | 55285-14-8 | 0.028 | 0.14 |
| P190 | Metolcarb | Metolcarb | 1129-41-5 | 0.056 | 1.4 |
| P191 | Dimetilan | Dimetilan | 644-64-4 | 0.056 | 0.28 |
| P192 | Isolan | Isolan | 119-38-0 | 0.056 | 1.4 |
| P194 | Oxamyl | Oxamyl | 23135-22-0 | 0.056 | 1.4 |
| P196 | Manganese dimethyldithiocarbamate | Dithiocarbamates (total) | NA | 0.028 | 1.4 |
| P197 | Formparanate | Formparanate | 17702-57-7 | 0.056 | 1.4 |
| | | | | | 1.4 |
| P198 | Formetanate hydrochloride | Formetanate hydrochloride | 23422-53-9 | 0.056 | 0.28 |
| P199 | Methiocarb | Methiocarb | 2032-65-7 | 0.056 | 28 |
| P201 | Promecarb | Promecarb | 2631-37-0 | 0.056 | 1.4 |
| P202 | m-Cumenyl methylcarbamate | m-Cumenyl methylcarbamate | 64-00-6 | 0.056 | |
| P203 | Aldicarb sulfone | Aldicarb sulfone | 1646-88-4 | 0.056 | 1.4 |
| P204 | Physostigmine | Physostigmine | 57-47-6 | 0.056 | 1.4 |
| P205 | Ziram | Dithiocarbamates (total) | NA | 0.028 | 1.4 |
| U001 | Acetaldehyde | Acetaldehyde | 75-07-0 | (WETOX or CHOXD) fb CARBN; or CMBST | 1.4 |
| U002 | Acetone | Acetone | 67-64-1 | 0.28 | 0.28 |
| U003 | Acetonitrile | Acetonitrile | 75-05-8 | 5.6 | 1.4 |
| | | Acetonitrile; alternate ⁶ standard for nonwastewaters only | 75-05-8 | NA | 28 |
| U004 | Acetophenone | Acetophenone | 98-86-2 | 0.010 | CMBST |
| U005 | 2-Acetylaminofluorene | 2-Acetylaminofluorene | 53-96-3 | 0.059 | 160 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| 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 | 38 |
| U008 | Acrylic acid | Acrylic acid | 79-10-7 | (WETOX or CHOXD) fb CARBN; or CMBST | 9.7 |
| U009 | Acrylonitrile | Acrylonitrile | 107-13-1 | 0.24 | 140 |
| 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 | 84 |
| U014 | Auramine | Auramine | 492-80-8 | (WETOX or CHOXD) fb CARBN; or 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 | 14 |
| U018 | Benz(a)anthracene | Benz(a)anthracene | 56-55-3 | 0.059 | CMBST |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|------------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| U019 | Benzene | Benzene | 71-43-2 | 0.14 | CMBST |
| 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 | 10 |
| U024 | bis(2-Chloroethoxy)methane | bis(2-Chloroethoxy)methane | 111-91-1 | 0.036 | CMBST |
| U025 | bis(2-Chloroethyl)ether | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | CMBST |
| U026 | Chlornaphazine | Chlornaphazine | 494-03-1 | (WETOX or CHOXD) fb CARBN; or CMBST | 3.4 |
| U027 | bis(2-Chloroisopropyl)ether | bis(2-Chloroisopropyl)ether | 39638-32-9 | 0.055 | CHOXD; CHRED; or CMBST |
| U028 | bis(2-Ethylhexyl) phthalate | is(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 7.2 |
| U029 | Methyl bromide (Bromomethane) | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 6.0 |
| U030 | 4-Bromophenyl phenyl ether | 4-Bromophenyl phenyl ether | 101-55-3 | 0.055 | CMBST |
| U031 | n-Butyl alcohol | n-Butyl alcohol | 71-36-3 | 5.6 | 7.2 |
| U032 | Calcium chromate | Chromium (Total) | 7440-47-3 | 2.77 | 28 |
| U033 | Carbon oxyfluoride | Carbon oxyfluoride | 353-50-4 | (WETOX or CHOXD) fb CARBN; or CMBST | 15 |
| U034 | Trichloroacetaldehyde (Chloral) | Trichloroacetaldehyde (Chloral) | 75-87-6 | (WETOX or CHOXD) fb CARBN; or CMBST | 15 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| U035 | Chlorambucil | Chlorambucil | 305-03-3 | (WETOX or CHOXD) fb CARBN; or CMBST | 2.6 |
| U036 | Chlordane | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.60 mg/l TCLP |
| U037 | Chlorobenzene | Chlorobenzene | 108-90-7 | 0.057 | CMBST |
| U038 | Chlorobenzilate | Chlorobenzilate | 510-15-6 | 0.10 | CMBST |
| U039 | p-Chloro-m-cresol | p-Chloro-m-cresol | 59-50-7 | 0.018 | CMBST |
| U041 | Epichlorohydrin (1-Chloro-2,3-epoxypropane) | Epichlorohydrin (1-Chloro-2,3-epoxypropane) | 106-89-8 | (WETOX or CHOXD) fb CARBN; or CMBST | 0.26 |
| U042 | 2-Chloroethyl vinyl ether | 2-Chloroethyl vinyl ether | 110-75-8 | 0.062 | 6.0 |
| U043 | Vinyl chloride | Vinyl chloride | 75-01-4 | 0.27 | CMBST |
| U044 | Chloroform | Chloroform | 67-66-3 | 0.046 | 14 |
| U045 | Chloromethane (Methyl chloride) | Chloromethane (Methyl chloride) | 74-87-3 | 0.19 | CMBST |
| U046 | Chloromethyl methyl ether | Chloromethyl methyl ether | 107-30-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U047 | 2-Chloronaphthalene | 2-Chloronaphthalene | 91-58-7 | 0.055 | 6.0 |
| U048 | 2-Chlorophenol | 2-Chlorophenol | 95-57-8 | 0.044 | 6.0 |
| U049 | 4-Chloro-o-toluidine hydrochloride | 4-Chloro-o-toluidine hydrochloride | 3165-93-3 | (WETOX or CHOXD) fb CARBN; or CMBST | 30 |
| U050 | Chrysene | Chrysene | 218-01-9 | 0.059 | CMBST |
| U051 | Creosote | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 5.7 |
| | | Phenanthrene | 85-01-8 | 0.059 | CMBST |
| | | Pyrene | 129-00-0 | 0.067 | 3.4 |
| | | Toluene | 108-88-3 | 0.080 | 5.6 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| U052 | Cresols (Cresylic acid) | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 7.4 |
| | | Lead | 7439-92-1 | 0.69 | 5.6 |
| | | o-Cresol | 95-48-7 | 0.11 | 8.2 |
| | | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 10 |
| | | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 30 |
| | | Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations) | 1319-77-3 | 0.88 | 0.75 mg/l TCLP |
| | | | | | |
| U053 | Crotonaldehyde | Crotonaldehyde | 4170-30-3 | (WETOX or CHOXD) fb CARBN; or CMBST | 5.6 |
| U055 | Cumene | Cumene | 98-82-8 | (WETOX or CHOXD) fb CARBN; or CMBST | 5.6 |
| U056 | Cyclohexane | Cyclohexane | 110-82-7 | (WETOX or CHOXD) fb CARBN; or CMBST | 5.6 |
| U057 | Cyclohexanone | Cyclohexanone | 108-94-1 | 0.36 | 11.2 |
| | | Cyclohexanone; alternate ⁶ standard for nonwastewaters only | 108-94-1 | NA | CMBST |
| U058 | Cyclophosphamide | Cyclophosphamide | 50-18-0 | CARBN; or CMBST | CMBST |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|--|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| U059 | Daunomycin | Daunomycin | 20830-81-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U060 | DDD | o,p'-DDD | 53-19-0 | 0.023 | CMBST |
| | | p,p'-DDD | 72-54-8 | 0.023 | 0.75 mg/l TCLP |
| U061 | DDT | o-p'-DDT | 789-02-6 | 0.0039 | CMBST |
| | | p,p'-DDT | 50-29-3 | 0.0039 | CMBST |
| | | 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 | 0.087 |
| U063 | Dibenz(a,h)anthracene | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 0.087 |
| U064 | Dibenz(a,i)pyrene | Dibenz(a,i)pyrene | 189-55-9 | (WETOX or CHOXD) fb CARBN; or CMBST | 0.087 |
| U066 | 1,2-Dibromo-3-chloropropane | 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.11 | 0.087 |
| U067 | Ethylene dibromide (1,2-Dibromoethane) | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | CMBST |
| U068 | Dibromomethane | Dibromomethane | 74-95-3 | 0.11 | 8.2 |
| U069 | Di-n-butyl phthalate | Di-n-butyl phthalate | 84-74-2 | 0.057 | CMBST |
| U070 | o-Dichlorobenzene | o-Dichlorobenzene | 95-50-1 | 0.088 | 15 |
| U071 | m-Dichlorobenzene | m-Dichlorobenzene | 541-73-1 | 0.036 | 15 |
| U072 | p-Dichlorobenzene | p-Dichlorobenzene | 106-46-7 | 0.090 | 15 |
| U073 | 3,3'-Dichlorobenzidine | 3,3'-Dichlorobenzidine | 91-94-1 | (WETOX or CHOXD) fb CARBN; or CMBST | 28 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|-------------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| U074 | 1,4-Dichloro-2-butene | cis-1,4-Dichloro-2-butene | 1476-11-5 | (WETOX or CHOXD) fb CARBN; or CMBST | 6.0 |
| | | trans-1,4-Dichloro-2-butene | 764-41-0 | (WETOX or CHOXD) fb CARBN; or CMBST | 6.0 |
| U075 | Dichlorodifluoromethane | Dichlorodifluoromethane | 75-71-8 | 0.23 | 6.0 |
| U076 | 1,1-Dichloroethane | 1,1-Dichloroethane | 75-34-3 | 0.059 | CMBST |
| U077 | 1,2-Dichloroethane | 1,2-Dichloroethane | 107-06-2 | 0.21 | CMBST |
| U078 | 1,1-Dichloroethylene | 1,1-Dichloroethylene | 75-35-4 | 0.025 | CMBST |
| U079 | 1,2-Dichloroethylene | trans-1,2-Dichloroethylene | 156-60-5 | 0.054 | 7.2 |
| U080 | Methylene chloride | Methylene chloride | 75-09-2 | 0.089 | 6.0 |
| U081 | 2,4-Dichlorophenol | 2,4-Dichlorophenol | 120-83-2 | 0.044 | 6.0 |
| U082 | 2,6-Dichlorophenol | 2,6-Dichlorophenol | 87-65-0 | 0.044 | 6.0 |
| U083 | 1,2-Dichloropropane | 1,2-Dichloropropane | 78-87-5 | 0.85 | 30 |
| U084 | 1,3-Dichloropropylene | cis-1,3-Dichloropropylene | 10061-01-5 | 0.036 | 30 |
| | | trans-1,3-Dichloropropylene | 10061-02-6 | 0.036 | 14 |
| U085 | 1,2:3,4-Diepoxybutane | 1,2:3,4-Diepoxybutane | 1464-53-5 | (WETOX or CHOXD) fb CARBN; or CMBST | 14 |
| U086 | N,N'-Diethylhydrazine | N,N'-Diethylhydrazine | 1615-80-1 | CHOXD; CHRED; CARBN; BIODG; or CMBST | 18 |
| U087 | O,O-Diethyl S-methyldithiophosphate | O,O-Diethyl S-methyldithiophosphate | 3288-58-2 | CARBN; or CMBST | 18 |
| U088 | Diethyl phthalate | Diethyl phthalate | 84-66-2 | 0.20 | 18 |
| U089 | Diethyl stilbestrol | Diethyl stilbestrol | 56-53-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|--|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| U090 | Dihydrosafrole | Dihydrosafrole | 94-58-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CHOXD; CHRED; or 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 | 28 |
| 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 | CMBST |
| U097 | Dimethylcarbamoyl chloride | Dimethylcarbamoyl chloride | 79-44-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U098 | 1,1-Dimethylhydrazine | 1,1-Dimethylhydrazine | 57-14-7 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CMBST |
| U099 | 1,2-Dimethylhydrazine | 1,2-Dimethylhydrazine | 540-73-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CMBST |
| U101 | 2,4-Dimethylphenol | 2,4-Dimethylphenol | 105-67-9 | 0.036 | CHOXD; CHRED; or CMBST |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| U102 | Dimethyl phthalate | Dimethyl phthalate | 131-11-3 | 0.047 | CMBST |
| 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 | CHOXD; CHRED; or CMBST |
| U106 | 2,6-Dinitrotoluene | 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 14 |
| 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 | CHOXD; CHRED; or CMBST |
| | | 1,4-Dioxane; alternate ⁶ | 123-91-1 | 12.0 | 140 |
| U109 | 1,2-Diphenylhydrazine | 1,2-Diphenylhydrazine | 122-66-7 | CHOXD; CHRED; CARBN; BIODG; or CMBST | 28 |
| | | 1,2-Diphenylhydrazine; alternate ⁶ standard for wastewaters only | 122-66-7 | 0.087 | 28 |
| 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 | 170 |
| U112 | Ethyl acetate | Ethyl acetate | 141-78-6 | 0.34 | CHOXD; CHRED; or CMBST |
| U113 | Ethyl acrylate | Ethyl acrylate | 140-88-5 | (WETOX or CHOXD) fb CARBN; or CMBST | NA |
| U114 | Ethylenebisdithiocarbamic acid salts and esters | Ethylenebisdithiocarbamic acid | 111-54-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|--|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| U115 | Ethylene oxide | Ethylene oxide | 75-21-8 | (WETOX or CHOXD) fb CARBN; or CMBST | 14 |
| | | Ethylene oxide; alternate ⁶ standard for wastewaters only | 75-21-8 | 0.12 | 33 |
| 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 | CMBST |
| U118 | Ethyl methacrylate | Ethyl methacrylate | 97-63-2 | 0.14 | CHOXD; or CMBST |
| U119 | Ethyl methane sulfonate | Ethyl methane sulfonate | 62-50-0 | (WETOX or CHOXD) fb CARBN; or CMBST | NA |
| U120 | Fluoranthene | Fluoranthene | 206-44-0 | 0.068 | CMBST |
| U121 | Trichloromonofluoromethane | Trichloromonofluoromethane | 75-69-4 | 0.020 | 160 |
| U122 | Formaldehyde | Formaldehyde | 50-00-0 | (WETOX or CHOXD) fb CARBN; or CMBST | 160 |
| 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 | 3.4 |
| U125 | Furfural | Furfural | 98-01-1 | (WETOX or CHOXD) fb CARBN; or CMBST | 30 |
| U126 | Glycidylaldehyde | Glycidylaldehyde | 765-34-4 | (WETOX or CHOXD) fb CARBN; or | CMBST |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|--|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | | | CMBST | |
| U127 | Hexachlorobenzene | Hexachlorobenzene | 118-74-1 | 0.055 | CMBST |
| U128 | Hexachlorobutadiene | Hexachlorobutadiene | 87-68-3 | 0.055 | CMBST |
| U129 | Lindane | alpha-BHC | 319-84-6 | 0.00014 | CMBST |
| | | beta-BHC | 319-85-7 | 0.00014 | CMBST |
| | | delta-BHC | 319-86-8 | 0.023 | 10 |
| | | gamma-BHC (Lindane) | 58-89-9 | 0.0017 | 5.6 |
| | | | | | |
| U130 | Hexachlorocyclopentadiene | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 0.066 |
| U131 | Hexachloroethane | Hexachloroethane | 67-72-1 | 0.055 | 0.066 |
| U132 | Hexachlorophene | Hexachlorophene | 70-30-4 | (WETOX or CHOXD) fb CARBN; or CMBST | 0.066 |
| | | | | | 0.066 |
| U133 | Hydrazine | Hydrazine | 302-01-2 | CHOXD; CHRED; CARBN; BIODG; or CMBST | 2.4 |
| U134 | Hydrogen fluoride | Fluoride (measured in wastewaters only) | 16964-48-8 | 35 | 30 |
| U135 | Hydrogen Sulfide | Hydrogen Sulfide | 7783-06-4 | CHOXD; CHRED, or CMBST | CMBST |
| U136 | Cacodylic acid | Arsenic | 7440-38-2 | 1.4 | |
| U137 | Indeno(1,2,3-c,d)pyrene | Indeno(1,2,3-c,d)pyrene | 193-39-5 | 0.0055 | CHOXD; CHRED; or CMBST |
| U138 | Iodomethane | Iodomethane | 74-88-4 | 0.19 | ADGAS fb NEUTR; or NEUTR |
| U140 | Isobutyl alcohol | Isobutyl alcohol | 78-83-1 | 5.6 | CHOXD; CHRED; or CMBST. |
| U141 | Isosafrole | Isosafrole | 120-58-1 | 0.081 | 5.0 mg/l TCLP |
| U142 | Kepone | Kepone | 143-50-8 | 0.0011 | 3.4 |
| U143 | Lasiocarpine | Lasiocarpine | 303-34-4 | (WETOX or CHOXD) | 65 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | | | fb CARBN; or CMBST | |
| U144 | Lead acetate | Lead | 7439-92-1 | 0.69 | 170 |
| U145 | Lead phosphate | Lead | 7439-92-1 | 0.69 | 2.6 |
| U146 | Lead subacetate | Lead | 7439-92-1 | 0.69 | 0.13 |
| 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 | 0.75 mg/l TCLP |
| U149 | Malononitrile | Malononitrile | 109-77-3 | (WETOX or CHOXD) fb CARBN; or CMBST | 0.75 mg/l TCLP |
| U150 | Melphalan | Melphalan | 148-82-3 | (WETOX or CHOXD) fb CARBN; or CMBST | 0.75 mg/l TCLP |
| U151 | U151 (mercury) nonwastewaters that contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | CMBST |
| | U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are residues from RMERC only. | Mercury | 7439-97-6 | NA | CMBST |
| | U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are not residues from RMERC. | Mercury | 7439-97-6 | NA | CMBST |
| | All U151 (mercury) wastewaters. | Mercury | 7439-97-6 | 0.15 | CMBST |
| | Elemental Mercury Contaminated with Radioactive Materials | Mercury | 7439-97-6 | NA | RMERC |
| U152 | Methacrylonitrile | Methacrylonitrile | 126-98-7 | 0.24 | 0.20 mg/l TCLP |
| U153 | Methanethiol | Methanethiol | 74-93-1 | (WETOX or CHOXD) | 0.025 mg/l TCLP |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | | | fb CARBN; or CMBST | |
| U154 | Methanol | Methanol | 67-56-1 | (WETOX or CHOXD) fb CARBN; or CMBST | NA |
| | | Methanol; alternate ⁶ set of standards for both wastewaters and nonwastewaters | 67-56-1 | 5.6 | AMLGM |
| U155 | Methapyrilene | Methapyrilene | 91-80-5 | 0.081 | 84 |
| U156 | Methyl chlorocarbonate | Methyl chlorocarbonate | 79-22-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U157 | 3-Methylcholanthrene | 3-Methylcholanthrene | 56-49-5 | 0.0055 | CMBST |
| U158 | 4,4'-Methylene bis(2-chloroaniline) | 4,4'-Methylene bis(2-chloroaniline) | 101-14-4 | 0.50 | 0.75 mg/l TCLP |
| U159 | Methyl ethyl ketone | Methyl ethyl ketone | 78-93-3 | 0.28 | 1.5 |
| U160 | Methyl ethyl ketone peroxide | Methyl ethyl ketone peroxide | 1338-23-4 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CMBST |
| U161 | Methyl isobutyl ketone | Methyl isobutyl ketone | 108-10-1 | 0.14 | 15 |
| U162 | Methyl methacrylate | Methyl methacrylate | 80-62-6 | 0.14 | 30 |
| U163 | N-Methyl N'-nitro N-nitrosoguanidine | N-Methyl N'-nitro N-nitrosoguanidine | 70-25-7 | (WETOX or CHOXD) fb CARBN; or CMBST | 36 |
| U164 | Methylthiouracil | Methylthiouracil | 56-04-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CHOXD; CHRED; or CMBST |
| U165 | Naphthalene | Naphthalene | 91-20-3 | 0.059 | 33 |
| U166 | 1,4-Naphthoquinone | 1,4-Naphthoquinone | 130-15-4 | (WETOX or CHOXD) fb CARBN; or | 160 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | | | 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 | 5.6 |
| U170 | p-Nitrophenol | p-Nitrophenol | 100-02-7 | 0.12 | CMBST |
| 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 | CMBST |
| U173 | N-Nitrosodiethanolamine | N-Nitrosodiethanolamine | 1116-54-7 | (WETOX or CHOXD) fb CARBN; or CMBST | 14 |
| U174 | N-Nitrosodiethylamine | N-Nitrosodiethylamine | 55-18-5 | 0.40 | 29 |
| | | | | | CMBST |
| | | | | | 17 |
| 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 | 28 |
| U178 | N-Nitroso-N-methylurethane | N-Nitroso-N-methylurethane | 615-53-2 | (WETOX or CHOXD) fb CARBN; or CMBST | |
| U179 | N-Nitrosopiperidine | N-Nitrosopiperidine | 100-75-4 | 0.013 | |
| U180 | N-Nitrosopyrrolidine | N-Nitrosopyrrolidine | 930-55-2 | 0.013 | CMBST |
| U181 | 5-Nitro-o-toluidine | 5-Nitro-o-toluidine | 99-55-8 | 0.32 | CMBST |
| U182 | Paraldehyde | Paraldehyde | 123-63-7 | (WETOX or CHOXD) fb CARBN; or | CMBST |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|--|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | | | CMBST | |
| U183 | Pentachlorobenzene | Pentachlorobenzene | 608-93-5 | 0.055 | 35 |
| U184 | Pentachloroethane | Pentachloroethane | 76-01-7 | (WETOX or CHOXD) fb CARBN; or CMBST | 35 |
| | | Pentachloroethane; alternate ⁶ standards for both wastewaters and nonwastewaters | 76-01-7 | 0.055 | 28 |
| U185 | Pentachloronitrobenzene | Pentachloronitrobenzene | 82-68-8 | 0.055 | CMBST |
| U186 | 1,3-Pentadiene | 1,3-Pentadiene | 504-60-9 | (WETOX or CHOXD) fb CARBN; or CMBST | 10 |
| U187 | Phenacetin | Phenacetin | 62-44-2 | 0.081 | CMBST |
| U188 | Phenol | Phenol | 108-95-2 | 0.039 | 6.0 |
| U189 | Phosphorus sulfide | Phosphorus sulfide | 1314-80-3 | CHOXD; CHRED; or CMBST | 4.8 |
| U190 | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | CMBST |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 16 |
| U191 | 2-Picoline | 2-Picoline | 109-06-8 | (WETOX or CHOXD) fb CARBN; or CMBST | 6.2 |
| U192 | Pronamide | Pronamide | 23950-58-5 | 0.093 | CHOXD; CHRED; or CMBST |
| U193 | 1,3-Propane sultone | 1,3-Propane sultone | 1120-71-4 | (WETOX or CHOXD) fb CARBN; or CMBST | 28 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable

| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| U194 | n-Propylamine | n-Propylamine | 107-10-8 | (WETOX or CHOXD) fb CARBN; or CMBST | 28 |
| U196 | Pyridine | Pyridine | 110-86-1 | 0.014 | CMBST |
| U197 | p-Benzoquinone | p-Benzoquinone | 106-51-4 | (WETOX or CHOXD) fb CARBN; or CMBST | 1.5 |
| 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 | 16 |
| U203 | Safrole | Safrole | 94-59-7 | 0.081 | CMBST |
| U204 | Selenium dioxide | Selenium | 7782-49-2 | 0.82 | CMBST |
| U205 | Selenium sulfide | Selenium | 7782-49-2 | 0.82 | CMBST |
| 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 | 22 |
| U208 | 1,1,1,2-Tetrachloroethane | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 5.7 mg/l TCLP |
| U209 | 1,1,2,2-Tetrachloroethane | 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.057 | 5.7 mg/l TCLP |
| U210 | Tetrachloroethylene | Tetrachloroethylene | 127-18-4 | 0.056 | CMBST |
| U211 | Carbon tetrachloride | Carbon tetrachloride | 56-23-5 | 0.057 | 14 |
| U213 | Tetrahydrofuran | Tetrahydrofuran | 109-99-9 | (WETOX or CHOXD) fb CARBN; or CMBST | 6.0 |
| U214 | Thallium (I) acetate | Thallium (measured in | 7440-28-0 | 1.4 | 6.0 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | wastewaters only) | | | |
| U215 | Thallium (I) carbonate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | 6.0 |
| U216 | Thallium (I) chloride | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | 6.0 |
| U217 | Thallium (I) nitrate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | CMBST |
| U218 | Thioacetamide | Thioacetamide | 62-55-5 | (WETOX or CHOXD) fb CARBN; or CMBST | RTHRM; or STABL |
| U219 | Thiourea | Thiourea | 62-56-6 | (WETOX or CHOXD) fb CARBN; or CMBST | RTHRM; or STABL |
| U220 | Toluene | Toluene | 108-88-3 | 0.080 | RTHRM; or STABL |
| U221 | Toluenediamine | Toluenediamine | 25376-45-8 | CARBN; or CMBST | RTHRM; or STABL |
| U222 | o-Toluidine hydrochloride | o-Toluidine hydrochloride | 636-21-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U223 | Toluene diisocyanate | oluene diisocyanate | 26471-62-5 | CARBN; or CMBST | CMBST |
| U225 | Bromoform (Tribromomethane) | Bromoform (Tribromomethane) | 75-25-2 | 0.63 | 10 |
| U226 | 1,1,1-Trichloroethane | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | CMBST |
| U227 | 1,1,2-Trichloroethane | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | CMBST |
| U228 | Trichloroethylene | Trichloroethylene | 79-01-6 | 0.054 | CMBST |
| U234 | 1,3,5-Trinitrobenzene | 1,3,5-Trinitrobenzene | 99-35-4 | (WETOX or CHOXD) fb CARBN; or CMBST | 15 |
| U235 | tris-(2,3-Dibromopropyl)-phosphate | tris-(2,3-Dibromopropyl)-phosphate | 126-72-7 | 0.11 | 6.0 |
| U236 | Trypan Blue | Trypan Blue | 72-57-1 | (WETOX or CHOXD) | 6.0 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|--|--|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| | | | | fb CARBN; or CMBST | |
| U237 | Uracil mustard | Uracil mustard | 66-75-1 | (WETOX or CHOXD) fb CARBN; or CMBST | 6.0 |
| 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 | 0.10 |
| U240 | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 94-75-7 | 0.72 | CMBST |
| | | | | | CMBST |
| | 2,4-D (2,4-Dichlorophenoxyacetic acid) salts and esters | | NA | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U243 | Hexachloropropylene | Hexachloropropylene | 1888-71-7 | 0.035 | 30 |
| U244 | Thiram | Thiram | 137-26-8 | (WETOX or CHOXD) fb CARBN; or CMBST | 10 |
| U246 | Cyanogen bromide | Cyanogen bromide | 506-68-3 | CHOXD; WETOX; or CMBST | |
| U247 | Methoxychlor | Methoxychlor | 72-43-5 | 0.25 | CMBST |
| U248 | Warfarin, & salts, when present at concentrations of 0.3% or less | Warfarin | 81-81-2 | (WETOX or CHOXD) fb CARBN; or CMBST | 30 |
| U249 | Zinc phosphide, Zn ₃ P ₂ , when present at concentrations of 10% or less | Zinc Phosphide | 1314-84-7 | CHOXD; CHRED; or CMBST | CMBST |
| U271 | Benomyl | Benomyl | 17804-35-2 | 0.056 | CHOXD; WETOX; or CMBST |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| U278 | Bendiocarb | Bendiocarb | 22781-23-3 | 0.056 | 0.18 |
| U279 | Carbaryl | Carbaryl | 63-25-2 | 0.006 | CMBST |
| U280 | Barban | Barban | 101-27-9 | 0.056 | CHOXD; CHRED; or CMBST |
| U328 | o-Toluidine | o-Toluidine | 95-53-4 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN. | 1.4 |
| U353 | p-Toluidine | p-Toluidine | 106-49-0 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN | 1.4 |
| | | | | | 0.14 |
| | | | | | 1.4 |
| 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 | CMBST |
| U367 | Carbofuran phenol | Carbofuran phenol | 1563-38-8 | 0.056 | |
| U372 | Carbendazim | Carbendazim | 10605-21-7 | 0.056 | |
| U373 | Propham | Propham | 122-42-9 | 0.056 | CMBST |
| 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 | 1.4 |
| U409 | Thiophanate-methyl | Thiophanate-methyl | 23564-05-8 | 0.056 | 1.4 |
| U410 | Thiodicarb | Thiodicarb | 59669-26-0 | 0.019 | 1.4 |

| TREATMENT STANDARDS FOR HAZARDOUS WASTES NOTE: NA means not applicable | | | | | |
|--|---|---------------------------------|-------------------------|--|--|
| WASTE CODE | WASTE DESCRIPTION AND TREATMENT/REGULATORY SUBCATEGORY ¹ | REGULATED HAZARDOUS CONSTITUENT | | WASTEWATERS | NONWASTEWATERS |
| | | Common Name | CAS ² Number | Concentration in mg/l ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/l TCLP"; or Technology Code ⁴ |
| U411 | Propoxur | Propoxur | 114-26-1 | 0.056 | 1.5 |
| | | | | | 7.4 |
| | | | | | 1.4 |
| | | | | | 1.4 |
| | | | | | 1.4 |

FOOTNOTES TO TREATMENT STANDARD TABLE §268.40

- 1 The waste descriptions provided in this table do not replace waste descriptions in Part 261. Descriptions of Treatment/Regulatory Subcategories are provided, as needed, to distinguish between applicability of different standards.
- 2 CAS means Chemical Abstract Services. When the waste code and/or regulated constituents are described as a combination of a chemical with 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 §268.42 Table 1 - Technology Codes and Descriptions of Technology-Based Standards.
- 5 Except for Metals (EP or TCLP) and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of Part 264 Subpart O or Part 265 Subpart O, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in §268.40(d). All concentration standards for nonwastewaters are based on analysis of grab samples.
- 6 Where an alternate treatment standard or set of alternate standards has been indicated, a facility may comply with this alternate standard, but only for the Treatment/Regulatory Subcategory or physical form (i.e., wastewater and/or nonwastewater) specified for that alternate standard.
- 7 Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using Method 9010 or 9012, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, as incorporated by reference in §260.11, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.

§268.40

- 8 These wastes, when rendered nonhazardous and then subsequently managed in CWA, or CWA-equivalent systems, are not subject to treatment standards. (See §268.1(c)(3) and (4)).
- 9 These wastes, when rendered nonhazardous and then subsequently injected in a Class I SDWA well are not subject to treatment standards. (See 40 CFR, §148.1(d)).
- 10 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 §268.42 Table 1 of this Part, for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at §268.42 Table 1 of this part, for wastewaters.
- 11 For these wastes, the definition of CMBST is limited to: (1) combustion units operating under Part 266, (2) combustion units permitted under Part 264, Subpart O, or (3) combustion units operating under Part 265, Subpart O, which have obtained a determination of equivalent treatment under §268.42(b).
(Amended June 19, 1992, November 19, 1993, August 1, 1995, July 23, 1996, August 21, 1997, January 1, 1999, August 23, 1999, June 2, 2000, April 23, 2001)

Section 268.41 Treatment standards expressed as concentrations in waste extract.

For the requirements previously found in this section and for treatment standards in Table CCWE - Constituent Concentrations in Waste Extracts, refer to §268.40.

(Amended July 26, 1994, August 1, 1995, July 23, 1996)

Section 268.42 Treatment standards expressed as specified technologies.

Note: For the requirements previously found in this section in Table 2 - Technology-Based Standards By Waste Code, and Table 3 - Technology - Based Standards for Specific Radioactive Hazardous Mixed Waste, refer to §268.40.

(a) The following wastes in the table in §268.40 "Treatment Standards for Hazardous Wastes", for which standards are expressed as a treatment method rather than a concentration level, must be treated using the technology or technologies specified in the table entitled "Technology Codes and Description of Technology-Based Standards" in this section.

Table 1 -- Technology Codes and Description of Technology-Based Standards

| <u>Technology code</u> | <u>Description of technology-based standards</u> |
|------------------------|---|
| 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. |
| <u>Technology code</u> | <u>Description of technology-based standards</u> |
| 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) permangantes; and/or (9) other oxidizing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues). Chemical oxidation specifically includes what is commonly referred to as alkaline chlorination.

CHRED:

Chemical reduction utilizing the following reducing reagents (or waste reagents) or combinations of reagents: (1) Sulfur dioxide; (2) sodium, potassium, or alkali salts or sulfites, bisulfites, metabisulfites, and polyethylene glycols (e.g., NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; and/or (5) other reducing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator 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 Part 264, Subpart O, or Part 265, Subpart O, or Part 266, Subpart H, and in other units operated in accordance with applicable technical operating requirements; and certain non-combustive technologies, such as the Catalytic Extraction Process.

Technology
code

Description of technology-based standards

DEACT:

Deactivation to remove the hazardous characteristics of a waste due to its ignitability, corrosivity, and/or reactivity.

FSUBS:

Fuel substitution in units operated in accordance with applicable technical operating requirements.

HLVIT:

Vitrification of high level mixed radioactive wastes in units in compliance with all applicable radioactive protection requirements under control of the Nuclear Regulatory Commission.

IMERC:

Incineration of wastes containing organics and mercury in units operated in accordance with the technical operating requirements of 40 CFR Part 264 Subpart O and Part 265 Subpart O. All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (e.g., High or Low Mercury Subcategories).

INCIN:

Incineration in units operated in accordance with the technical operating requirements of 40 CFR Part 264 Subpart O and Part 265 Subpart O.

| | |
|------------------------|---|
| LLEXT: | Liquid-liquid extraction (often referred to as solvent extraction) of organics from liquid wastes into an immiscible solvent for which the hazardous constituents have a greater solvent affinity, resulting in an extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and a raffinate (extracted liquid waste) proportionately low in organics that must undergo further treatment as specified in the standard. |
| MACRO: | Macroencapsulation with surface coating materials such as polymeric organics (e.g. resins and plastics) or with a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media. Macroencapsulation specifically does not include any material that would be classified as a tank or container according to 40 CFR §260.10. |
| NEUTR: | Neutralization with the following reagents (or waste reagents) or combinations of reagents: (1) Acids; (2) bases; or (3) water (including wastewaters) resulting in a pH greater than 2 but less than 12.5 as measured in the aqueous residuals. |
| NLDBR: | No land disposal based on recycling. |
| <u>Technology code</u> | <u>Description of technology-based standards</u> |
| 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, fluorides, 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 §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).

Technology
code

RMETL:

Description of technology-based standards

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 40 CFR §260.10 (1), (6), (7), (11), and (12) under the definition of "industrial furnaces".

RZINC:

Resmelting in high temperature metal recovery units for the purpose of recovery of zinc.

STABL:

Stabilization with the following reagents (or waste reagents) or combinations of reagents: (1) Portland cement; or (2) lime/pozzolans (e.g., fly ash and cement kiln dust) - this does not preclude the addition of reagents (e.g., iron salts, silicates, and clays) designed to enhance the set/cure time and/or compressive strength, or to overall reduce the leachability of the metal or inorganic.

Technology
code

SSTRP:

Description of technology-based standards

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.

Note 1: When a combination of these technologies (i.e., a treatment train) is specified as a single treatment standard, the order of application is specified in §268.42, Table 2 by indicating the five letter technology code that must be applied first, then the designation "fb." (an abbreviation for "followed by"), then the five letter technology code for the technology that must be applied next, and so on.

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

(b) Any person may submit an application to the Administrator demonstrating that an alternative treatment method can achieve a measure of performance equivalent to that achieved by methods specified in paragraphs (a), (c), and (d) of this section for wastes or specified in Table 1 of §268.45 for hazardous debris. The applicant must submit information demonstrating that his treatment method is in compliance with federal, state, and local requirements and is protective of human health and the environment. On the basis of such information and any other available information, the Administrator may approve the use of the alternative treatment method if he finds that the alternative treatment method provides a measure of performance equivalent to that achieved by methods specified in paragraphs (a), (c), and (d) of this section for wastes or in Table 1 of §268.45 for hazardous debris. Any approval must be stated in writing and may contain such provisions and conditions as the Administrator deems appropriate. The person to whom such approval is issued must comply with all limitations contained in such a determination.

(c) As an alternative to the otherwise applicable Subpart D treatment standards, lab packs are eligible for land disposal provided the following requirements are met:

- (1) The lab packs comply with the applicable provisions of 40 CFR §§264.316 and 265.316;
- (2) The lab pack does not contain any of the wastes listed in Appendix IV to Part 268;
- (3) The lab packs are incinerated in accordance with the requirements of 40 CFR Part 264, Subpart O or 40 CFR Part 265, Subpart O; and
- (4) Any incinerator residues from lab packs containing D004, D005, D006, D007, D008, D010, and D011 are treated in compliance with the applicable treatment standards specified for such wastes in Subpart D of this part.

(d) Radioactive hazardous mixed wastes are subject to the treatment standards in §268.40. Where treatment standards are specified for radioactive mixed wastes in the Table of Treatment Standards, those treatment standards will govern. Where there is no specific treatment standard for radioactive mixed waste, the treatment standard for the hazardous waste (as designated by waste code) applies. Hazardous debris containing radioactive waste is subject to the treatment standards specified in §268.45. (Amended August 1, 1995, July 23, 1996, January 1, 1999, August 23, 1999)

Section 268.43 Treatment standards expressed as waste concentrations.

For the requirements previously found in this section and for treatment standards in Table CCW - Constituent Concentrations in Wastes, refer to §268.40.

(Revised July 23, 1996)

Section 268.44 Variance from a treatment standard.

(a) Based on a petition filed by a generator or treater of hazardous waste, the EPA Administrator may approve a variance from an applicable treatment standard if:

(1) It is not physically possible to treat the waste to the level specified in the treatment standard, or by the method specified as the treatment standard. To show that this is the case, the petitioner must demonstrate that because the physical or chemical properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method; or

(2) It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible. To show that this is the case, the petitioner must either demonstrate that:

(i) Treatment to the specified level or by the specified method is technically inappropriate (for example, resulting in combustion of large amounts of mildly contaminated environmental media); or

(ii) For remediation waste only, treatment to the specified level or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation.

(b) Each petition must be submitted in accordance with the procedures in §260.20.

(c) Each petition must include the following statement signed by the petitioner or an authorized representative:

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

(d) After receiving a petition for variance from a treatment standard, the Administrator may request any additional information or samples which he may require to evaluate the petition. Additional copies of the complete petition may be requested as needed to send to affected states and Regional Offices.

(e) The Administrator will give public notice in the FEDERAL REGISTER of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a variance from a treatment standard will be published in the FEDERAL REGISTER.

(f) A generator, treatment facility, or disposal facility that is managing a waste covered by a variance from the treatment standards must comply with the waste analysis requirements for restricted wastes found under §268.7.

(g) During the petition review process, the applicant is required to comply with all restrictions on land disposal under this part once the effective date for the waste has been reached.

(h) Based on a petition filed by a generator or treater of hazardous waste, the EPA Administrator or his or her delegated representative may approve a site-specific variance from an applicable treatment standard if:

(1) It is not physically possible to treat the waste to the level specified in the treatment standard, or by the method specified as the treatment standard. To show that this is the case, the petitioner must demonstrate that because the physical or chemical properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method; or

(2) It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though such treatment is technically possible. To show that this is the case, the petitioner must either demonstrate that:

(i) Treatment to the specified level or by the specified method is technically inappropriate (for example, resulting in combustion of large amounts of mildly contaminated environmental media where the treatment standard is not based on combustion of such media); or

(ii) For remediation waste only, treatment to the specified level or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation.

(3) For contaminated soil only, treatment to the level or by the method specified in the soil treatment standards would result in concentrations of hazardous constituents that are below (i.e., lower than) the concentrations necessary to minimize short- and long-term threats to human health and the environment. Treatment variances approved under this paragraph must:

(i) At a minimum, impose alternative land disposal restriction treatment standards that, using a reasonable maximum exposure scenario:

(A) for carcinogens, achieve constituent concentrations that result in the total excess risk to an individual exposed over a lifetime generally falling within a range from 10^{-4} to 10^{-6} ; and

(B) for constituents with non-carcinogenic effects, achieve constituent concentrations that an individual could be exposed to on a daily basis without appreciable risk of deleterious effect during a lifetime.

(ii) not consider post-land-disposal controls.

(4) For contaminated soil only, treatment to the level or by the method specified in the soil treatment standards would result in concentrations of hazardous constituents that are below (i.e., lower than) natural background concentrations at the site where the contaminated soil will land disposed.

(5) Public notice and a reasonable opportunity for public comment must be provided before granting or denying a petition.

(i) Each application for a site-specific variance from a treatment standard must include the information in §260.20(b)(1)-(4);

§268.44

(j) After receiving an application for a site-specific variance from a treatment standard, the Assistant Administrator, or his delegated representative, may request any additional information or samples which may be required to evaluate the application.

(k) A generator, treatment facility, or disposal facility that is managing a waste covered by a site-specific variance from a treatment standard must comply with the waste analysis requirements for restricted wastes found under §268.7.

(l) During the application review process, the applicant for a site-specific variance must comply with all restrictions on land disposal under this part once the effective date for the waste has been reached.

(m) For all variances, the petitioner must also demonstrate that compliance with any given treatment variance is sufficient to minimize threats to human health and the environment posed by land disposal of the waste. In evaluating this demonstration, EPA may take into account whether a treatment variance should be approved if the subject waste is to be used in a manner constituting disposal pursuant to §§ 266.20 through 266.23.

(n) **[Reserved]**

(o) The following facilities are excluded from the treatment standards under §268.40 and are subject to the following constituent concentrations:

§268.44

TABLE - WASTES EXCLUDED FROM THE TREATMENT STANDARDS UNDER §268.40

| Facility name ¹ and address | Waste code | See also | Regulated hazardous constituent | <u>Wastewaters</u> | | <u>Nonwastewaters</u> | |
|--|------------|----------------------|---------------------------------|----------------------|-----------------------------------|-----------------------|------------------|
| | | | | Concentration (mg/l) | Notes | Concentration (mg/kg) | Notes |
| Craftsman Plating and Tinning, Corp., Chicago, IL. | F006 | Table CCWE 268.40 in | Cyanides (Total) | 1.2 | (²) | 1800 | (⁴) |
| | | | Cyanides (Amenable) | .86 | (² and ³) | 30 | (⁴) |
| | | | Cadmium | 1.6 | | NA | |
| | | | Chromium | .32 | | NA | |
| | | | Lead | .040 | | NA | |
| | | | Nickel | .44 | | NA | |
| Northwestern Plating Works, Inc., Chicago, IL. | F006 | Table CCWE 268.40 in | Cyanides (Total) | 1.2 | (² and ³) | 970 | (⁴) |
| | | | Cyanides (Amenable) | .86 | (²) | 30 | (⁴) |
| | | | Cadmium | 1.6 | | NA | |
| | | | Chromium | .32 | | NA | |
| | | | Lead | .040 | | NA | |
| | | | Nickel | .44 | | NA | |

FOOTNOTE: ⁽¹⁾-A facility may certify compliance with these treatment standards according to provisions in 40 CFR 268.7.

FOOTNOTE: ⁽²⁾-Cyanide Wastewater Standards for F006 are based on analysis of composite samples.

FOOTNOTE: ⁽³⁾-These facilities must comply with 0.86 mg/l for amenable cyanides in the wastewater exiting the alkaline chlorination system. These facilities must also comply with 40 CFR §268.7.a.4 for appropriate monitoring frequency consistent with the facilities' waste analysis plan.

FOOTNOTE: ⁽⁴⁾-Cyanide nonwastewaters are analyzed using SW-846 Method 9010 or 9012, sample size 10 grams, distillation time, 1 hour and 15 minutes.

Note: NA means Not Applicable.

(Amended January 1, 1999, August 23, 1999)

Subpart D - Treatment Standards for Hazardous Debris

Section 268.45 Treatment standards for hazardous debris.

(a) Treatment standards. Hazardous debris must be treated prior to land disposal as follows unless DNREC determines under §261.3(f)(2) of these regulations that the debris is no longer contaminated with hazardous waste or the debris is treated to the waste-specific treatment standard provided in this subpart for the waste contaminating the debris:

(1) General. Hazardous debris must be treated for each "contaminant subject to treatment" defined by paragraph (b) of this section using the technology or technologies identified in Table 1 of this section.

(2) Characteristic debris. Hazardous debris that exhibits the characteristic of ignitability, corrosivity, or reactivity identified under §§ 261.21, 261.22, and 261.23 of these regulations, respectively, must be deactivated by treatment using one of the technologies identified in Table 1 of this section.

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

(4) Mixtures of contaminant types. Debris that is contaminated with two or more contaminants subject to treatment identified under paragraph (b) of this section must be treated for each contaminant using one or more treatment technologies identified in Table 1 of this section. If an immobilization technology is used in a treatment train, it must be the last treatment technology used.

(5) Waste PCBs. Hazardous debris that is also a waste PCB under 40 CFR Part 761 is subject to the requirements of either 40 CFR Part 761 or the requirements of this section, whichever are more stringent.

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

(1) Toxicity characteristic debris. The contaminants subject to treatment for debris that exhibits the Toxicity Characteristic (TC) by §261.24 of these regulations are those EP constituents for which the debris exhibits the TC toxicity characteristic.

(2) Debris contaminated with listed waste. The contaminants subject to treatment for debris that is contaminated with a prohibited listed hazardous waste are those constituents or wastes for which treatment standards are established for the waste under §268.40.

(3) Cyanide reactive debris. Hazardous debris that is reactive because of cyanide must be treated for cyanide.

(c) Conditioned exclusion of treated debris. Hazardous debris that has been treated using one of the specified extraction or destruction technologies in Table 1 of this section and that does not exhibit a characteristic of hazardous waste identified under Subpart C, Part 261, of these regulations after treatment is not a hazardous waste and need not be managed in a Subtitle C facility. Hazardous debris contaminated with a listed waste that is treated by an immobilization technology specified in Table 1 is a hazardous waste and must be managed in a Subtitle C facility.

(d) Treatment residuals-(1) General requirements. Except as provided by paragraphs (d)(2) and (d)(4) of this section:

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

(ii) Residue from the treatment of hazardous debris is subject to the waste-specific treatment standards provided by Subpart D of this part for the waste contaminating the debris.

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

(3) Cyanide-reactive debris. Residue from the treatment of debris that is reactive because of cyanide must meet the treatment standards for D003 in "Treatment Standards for Hazardous Wastes" at §268.40.

(4) 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.

(5) Residue from spalling. Layers of debris removed by spalling are hazardous debris that remain subject to the treatment standards of this section.

Table 1. - Alternative Treatment Standards For Hazardous Debris¹

| Technology description | Performance and/or design and operating standard | Contaminant restrictions ² |
|--|---|---|
| A. Extraction Technologies: | | |
| 1. Physical Extraction | | |
| a. Abrasive Blasting: Removal of contaminated debris surface layers using water and/or air pressure to propel a solid media (e.g., steel shot, aluminum oxide grit, plastic beads). | Glass, Metal, Plastic, Rubber: Treatment to a clean debris 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 | All Debris: None. |
| 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 §268.42(b); ⁸ debris surfaces must be in contact with water solution for at least 15 minutes | 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 §268.42(b) must be obtained. ⁸ |
| b. Liquid Phase Solvent Extraction: Removal of hazardous contaminants from debris surfaces and surface pores by applying a nonaqueous liquid or | 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 |

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

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 §268.42(b).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 §268.42(b);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 biodegradation 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 §268.42(b);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

All Debris: Obtain an "Equivalent Technology" approval under §268.42(b);⁸ treated debris must be separated from treatment residuals using simple physical or mechanical means,⁹ and, prior to further treatment, such residue

All Debris: Metal contaminants.

(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.

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

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: Treatment in an incinerator operating in accordance with Subpart O of Parts 264 or 265 of these regulations; a boiler or industrial furnace operating in accordance with Subpart H of Part 266 of these regulations, or other thermal treatment unit operated in accordance with Subpart X, Part 264 of these regulations, or Subpart P, Part 265 of these regulations, but excluding for purposes of these debris treatment standards Thermal Desorption units.

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, Concrete, Glass, Metal, Pavement, Rock, Metal: Metals other than mercury, except that there are no metal restrictions for vitrification. Debris contaminated with a dioxin-listed waste.⁸ Obtain an "Equivalent Technology" approval under §268.42(b),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: ¹Hazardous 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: ²Contaminant 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: ⁴Acids, 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: ⁵If 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: ⁶Dioxin-listed wastes are EPA Hazardous Waste numbers FO20, FO21, FO22, FO23, FO26, and FO27.

FOOTNOTE: ⁷Thermal 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: ⁸The demonstration "Equivalent Technology" under §268.42(b) 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: ⁹Any 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.

(Amended August 1, 1995, July 23, 1996, August 23, 1999)

Section 268.46 Alternative treatment standards based on HTMR.

For the treatment standards previously found in this section, refer to §268.40.

Table 1 identifies alternative treatment standards for F006 and K062 nonwastewaters.

Table 1. - Alternative Treatment Standards

| Waste code | See also | Regulated hazardous constituent | CAS No. for regulated hazardous constituent | Nonwastewaters concentration (mg/l) TCLP |
|------------|--|---------------------------------|---|--|
| F006 | Table CCWE in 268.41 and Table CCW in 268.43 | Antimony | 7440-36-0 | 2.1 |
| | | Arsenic | 7440-38-2 | 0.055 |
| | | Barium | 7440-39-3 | 7.6 |
| | | Beryllium | 7440-41-7 | 0.014 |
| | | Cadmium | 7440-43-9 | 0.19 |
| | | Chromium (total) | 7440-47-32 | 0.33 |
| | | Cyanide (mg/kg) (total) | 57-12-5 | 1.8 |
| | | Lead | 7439-92-1 | 0.37 |
| | | Mercury | 7439-97-6 | 0.009 |
| | | Nickel | 7440-02-0 | 5.0 |

K062

Table CCWE in
268.41 and Table
CCW in 268.43

| | | |
|------------------|------------|-------|
| Selenium | 7782-49-2 | 0.16 |
| Silver | 7440-22-4 | 0.30 |
| Thallium | | 0.078 |
| Zinc | 7440-66-6 | 5.3 |
| Antimony | 7440-36-0 | 2.1 |
| Arsenic | 7440-38-2 | 0.055 |
| Barium | 7440-39-3 | 7.6 |
| Beryllium | 7440-41-7 | 0.014 |
| Cadmium | 7440-43-9 | 0.19 |
| Chromium (total) | 7440-47-32 | 0.33 |
| Lead | 7439-92-1 | 0.37 |
| Mercury | 7439-97-6 | 0.009 |
| Nickel | 7440-02-0 | 5.0 |
| Selenium | 7782-49-2 | 0.16 |
| Silver | 7440-22-4 | 0.30 |
| Thallium | | 0.078 |
| Zinc | 7440-66-6 | 5.3 |

(Amended August 1, 1995, July 23, 1996)

Section 268.48 Universal Treatment Standards

(a) Table UTS identifies the hazardous constituents, along with the nonwastewater and wastewater treatment standard levels, that are used to regulate most prohibited hazardous wastes with numerical limits. For determining compliance with treatment standards for underlying hazardous constituents as defined in §268.2(i), these treatment standards may not be exceeded. Compliance with these treatment standards is measured by an analysis of grab samples, unless otherwise noted in the following Table UTS.

Universal Treatment Standards

| UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable | | | |
|---|-------------------------|---------------------------------------|--|
| REGULATED CONSTITUENT Common Name | CAS ¹ Number | Wastewater Standard | Nonwastewater Standard |
| | | Concentration in mg/l ² | Concentration in mg/kg ³ unless noted as "mg/l TCLP" |
| <i>Organic Constituents</i> | | | |
| 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 |

| UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable | | | |
|--|-------------------------|---------------------------------------|--|
| REGULATED CONSTITUENT Common Name | CAS ¹ Number | Wastewater Standard | Nonwastewater Standard |
| | | Concentration in mg/l ² | Concentration in mg/kg ³ unless noted as "mg/l TCLP" |
| Acrylamide | 79-06-1 | 19 | 23 |
| Acrylonitrile | 107-13-1 | 0.24 | 84 |
| Aldicarb sulfone ⁶ | 1646-88-4 | 0.056 | 0.28 |
| Aldrin | 309-00-2 | 0.021 | 0.066 |
| 4-Aminobiphenyl | 92-67-1 | 0.13 | NA |
| Aniline | 62-53-3 | 0.81 | 14 |
| Anthracene | 120-12-7 | 0.059 | 3.4 |
| Aramite | 140-57-8 | 0.36 | NA |
| alpha-BHC | 319-84-6 | 0.00014 | 0.066 |
| beta-BHC | 319-85-7 | 0.00014 | 0.066 |
| delta-BHC | 319-86-8 | 0.023 | 0.066 |
| gamma-BHC | 58-89-9 | 0.0017 | 0.066 |
| Barban ⁶ | 101-27-9 | 0.056 | 1.4 |
| Bendiocarb ⁶ | 22781-23-3 | 0.056 | 1.4 |
| 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 |

| UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable | | | |
|---|-------------------------|---------------------------------------|--|
| REGULATED CONSTITUENT Common Name | CAS ¹ Number | Wastewater Standard | Nonwastewater Standard |
| | | Concentration in mg/l ² | Concentration in mg/kg ³ unless noted as "mg/l TCLP" |
| bis(2-Chloroethoxy)methane | 111-91-1 | 0.036 | 7.2 |
| bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| Chloroform | 67-66-3 | 0.046 | 6.0 |
| bis(2-Chloroisopropyl)ether | 39638-32-9 | 0.055 | 7.2 |
| p-Chloro-m-cresol | 59-50-7 | 0.018 | 14 |
| 2-Chloroethyl vinyl ether | 110-75-8 | 0.062 | NA |
| Chloromethane/Methyl chloride | 74-87-3 | 0.19 | 30 |
| 2-Chloronaphthalene | 91-58-7 | 0.055 | 5.6 |
| 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| 3-Chloropropylene | 107-05-1 | 0.036 | 30 |
| Chrysene | 218-01-9 | 0.059 | 3.4 |
| o-Cresol | 95-48-7 | 0.11 | 5.6 |
| m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| p-Cresol (difficult to distinguish from m-cresol) | 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 |

| UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable | | | |
|--|-------------------------|---------------------------------------|--|
| REGULATED CONSTITUENT Common Name | CAS ¹ Number | Wastewater Standard | Nonwastewater Standard |
| | | Concentration in mg/l ² | Concentration in mg/kg ³ unless noted as "mg/l TCLP" |
| p-Dimethylaminoazobenzene | 60-11-7 | 0.13 | NA |
| 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 ⁶ | 759-94-4 | 0.042 | 1.4 |
| Ethyl acetate | 141-78-6 | 0.34 | 33 |
| Ethyl benzene | 100-41-4 | 0.057 | 10 |
| Ethyl cyanide/Propanenitrile | 107-12-0 | 0.24 | 360 |
| Ethyl ether | 60-29-7 | 0.12 | 160 |
| bis(2-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 ⁶ | 23422-53-9 | 0.056 | 1.4 |
| Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| 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 |

| UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable | | | |
|---|-------------------------|---------------------------------------|--|
| REGULATED CONSTITUENT Common Name | CAS ¹ Number | Wastewater Standard | Nonwastewater Standard |
| | | Concentration in mg/l ² | Concentration in mg/kg ³ unless noted as "mg/l TCLP" |
| 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 ⁵ | 2032-65-7 | 0.056 | 1.4 |
| Methomyl ⁵ | 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 ⁵ | 1129-41-5 | 0.056 | 1.4 |
| Mexacarbate ⁵ | 315-18-4 | 0.056 | 1.4 |
| Molinate ⁵ | 2212-67-1 | 0.042 | 1.4 |
| Naphthalene | 91-20-3 | 0.059 | 5.6 |
| 2-Naphthylamine | 91-59-8 | 0.52 | NA |
| o-Nitroaniline | 88-74-4 | 0.27 | 14 |
| p-Nitroaniline | 100-01-6 | 0.028 | 28 |
| Nitrobenzene | 98-95-3 | 0.068 | 14 |
| 5-Nitro-o-toluidine | 99-55-8 | 0.32 | 28 |
| o-Nitrophenol | 88-75-5 | 0.028 | 13 |
| p-Nitrophenol | 100-02-7 | 0.12 | 29 |
| N-Nitrosodiethylamine | 55-18-5 | 0.40 | 28 |
| N-Nitrosodimethylamine | 62-75-9 | 0.40 | 2.3 |
| N-Nitroso-di-n-butylamine | 924-16-3 | 0.40 | 17 |
| N-Nitrosomethylethylamine | 10595-95-6 | 0.40 | 2.3 |
| N-Nitrosomorpholine | 59-89-2 | 0.40 | 2.3 |
| N-Nitrosopiperidine | 100-75-4 | 0.013 | 35 |
| N-Nitrosopyrrolidine | 930-55-2 | 0.013 | 35 |
| Oxamyl ⁵ | 23135-22-0 | 0.056 | 0.28 |
| Parathion | 56-38-2 | 0.014 | 4.6 |
| Total PCBs (sum of all PCB isomers, or all Aroclors) | 1336-36-3 | 0.10 | 10 |
| Pebulate ⁵ | 1114-71-2 | 0.042 | 1.4 |
| Pentachlorobenzene | 608-93-5 | 0.055 | 10 |

| UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable | | | |
|---|-------------------------|---------------------------------------|--|
| REGULATED CONSTITUENT Common Name | CAS ¹ Number | Wastewater Standard | Nonwastewater Standard |
| | | Concentration in mg/l ² | Concentration in mg/kg ³ unless noted as "mg/l TCLP" |
| 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 |
| 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 |

| UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable | | | |
|--|-------------------------|---------------------------------------|--|
| REGULATED CONSTITUENT Common Name | CAS ¹ Number | Wastewater Standard | Nonwastewater Standard |
| | | Concentration in mg/l ² | Concentration in mg/kg ³ unless noted as "mg/l TCLP" |
| 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 ⁵ | 101-44-8 | 0.081 | 1.5 |
| tris-(2,3-Dibromopropyl) phosphate | 126-72-7 | 0.11 | 0.10 |
| Vernolate ⁵ | 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 |
| <i>Inorganic Constituents</i> | | | |
| 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/l TCLP |
| 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 TABLE UTS

- 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 44.
- Concentration standards for wastewaters are expressed in mg/l and are based on analysis of composite samples.
- 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 Part 264, Subpart O or Part 265, Subpart O, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in §268.40(d). All concentration standards for nonwastewaters are based on analysis of grab samples.
- Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using Method 9010 or 9012, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.
- These constituents are not "underlying hazardous constituents" in characteristic wastes, according to the definition at §268.2(i).
- Between August 26, 1998 and March 4, 1999, these constituents are not "underlying hazardous constituents" as defined in §268.2(i) of this part.

- 7 This constituent is not an underlying hazardous constituent as defined at 268.2(i) of this Part 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.
(Amended July 23, 1996, January 1, 1999, August 23, 1999, June 2, 2000, April 23, 2001)

§268.49 Alternative LDR treatment standards for contaminated soil.

(a) 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 Part 268 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.

(b) Prior to land disposal, contaminated soil identified by paragraph (a) of this section as needing to comply with LDRs must be treated according to the applicable treatment standards specified in paragraph (c) of this section or according to the Universal Treatment Standards specified in §268.48 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 paragraph (c) of this section and the Universal Treatment Standards may be modified through a treatment variance approved in accordance with 40 CFR, §268.44.

(c) *Treatment standards for contaminated soils.* Prior to land disposal, contaminated soil identified by paragraph (a) of this section as needing to comply with LDRs must be treated according to all the standards specified in this subsection or according to the Universal Treatment Standards specified in §268.48.

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

(A) For non-metals except carbon disulfide, cyclohexanone, and methanol, treatment must achieve 90 percent reduction in total constituent concentrations, except as provided by paragraph (c)(1)(C) of this section.

(B) 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 paragraph (c)(1)(C) of this section.

(C) 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 §268.48 Table UTS.

(2) *Soils that exhibit the characteristic of ignitability, corrosivity or reactivity.* In addition to the treatment required by paragraph (c)(1) of this section, prior to land disposal, soils that exhibit the characteristic of ignitability, corrosivity, or reactivity must be treated to eliminate these characteristics.

(3) *Soils that contain nonanalyzable constituents.* In addition to the treatment requirements of paragraphs (c)(1) and (2) of this section, prior to land disposal, the following treatment is required for soils that contain nonanalyzable constituents:

(A) For soil that contains only analyzable and nonanalyzable organic constituents, treatment of the analyzable organic constituents to the levels specified in paragraphs (c)(1) and (2) of this section; or,

(B) For soil that contains only nonanalyzable constituents, treatment by the method(s) specified in §268.42 for the waste contained in the soil.

(d) *Constituents subject to treatment.* When applying the soil treatment standards in subsection (c) of this subpart, constituents subject to treatment are any constituents listed in §268.48, 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 are present at concentrations greater than ten times the universal treatment standard.

(e) *Management of treatment residuals.* Treatment residuals from treating contaminated soil identified by paragraph (a) of this section as needing to comply with LDRs must be managed as follows:

(1) Soil residuals are subject to the treatment standards of this section;

(2) Non-soil residuals are subject to:

(A) For soils contaminated by listed hazardous waste, the standards applicable to the listed hazardous waste; and

(B) 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.

(Amended June 2, 2000, April 23, 2001)

Subpart E - Prohibitions on Storage**Section 268.50 Prohibitions on storage of restricted wastes.**

(a) Except as provided for in this section, the storage of hazardous wastes restricted from land disposal under Subpart C of this part, or RCRA §3004, is prohibited, unless the following conditions are met:

(1) 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 §262.34 and Parts 264 and 265 of these regulations.

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

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

(ii) Each tank is clearly marked with a description of its contents, the quantity of each hazardous waste received, and the date each period of accumulation begins, or such information for each tank is recorded and maintained in the operating record at that facility. Regardless of whether the tank itself is marked, an owner/operator must comply with the operating record requirements specified in §264.73 or §265.73.

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

(b) An owner/operator of a treatment, storage or disposal facility may store such wastes for up to one year unless the 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.

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

(d) If a generator's waste is exempt from a prohibition on the type of land disposal utilized for the waste (for example, because of an approved case-by-case extension under §268.5, an approved §268.6 petition, or a national capacity variance under Subpart C), the prohibition in paragraph (a) of this section does not apply during the period of such exemption.

(e) The prohibition in paragraph (a) of this section does not apply to hazardous wastes that meet the treatment standards specified under §§268.41, 268.42, and 268.43 or the treatment standards specified under the variance in §268.44, or, where treatment standards have not been specified, is in compliance with the applicable prohibitions specified in §268.32 or RCRA §3004.

(f) Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 ppm must be stored at a facility that meets the requirements of 40 CFR §761.65(b) and must be removed from storage and treated or disposed as required by this part within one year of the date when such wastes are first placed in storage. The provisions of paragraph (c) of this section do not apply to such PCB wastes prohibited under §268.32 of this part.

(g) The prohibition and requirements in this section do not apply to hazardous remediation wastes stored in a staging pile approved pursuant to §264.554 of these regulations.

(Amended August 1, 1995, June 2, 2000)

Appendices I, II, and III - [Reserved]

Appendix IV - Wastes Excluded From Lab Packs Under the Alternative Treatment Standards of §268.42

Hazardous waste with the following EPA Hazardous Waste Codes may not be placed in lab packs under the alternative lab pack treatment standards of §268.42(c): D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, U151.

(Amended July 23, 1996)

Appendix V - [Reserved]

**Appendix VI - Recommended Technologies to
Achieve Deactivation of Characteristics in §268.42**

The treatment standard for many characteristic wastes is stated in the §268.40 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 §268.2(i)) must be treated not only by a "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 §268.42 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.

| <u>Waste code/subcategory</u> | <u>Nonwastewaters</u> | <u>Wastewaters</u> |
|---|--|---|
| D001 Ignitable Liquids based on 261.21(a)(1) -- Low TOC Nonwastewater Subcategory (containing 1% to <10% TOC) | RORGS INCIN WETOX CHOXD BIODG | n.a. |
| D001 Ignitable Liquids based on 261.21(a)(1) -- Ignitable Wastewater Subcategory (containing <1% TOC) | n.a. | RORGS INCIN WETOX CHOXD BIODG |
| D001 Compressed Gases based on 261.21(A)(3) | RCGAS INCIN FSUBS ADGAS fb. INCIN ADGAS fb. (CHOXD; or CHRED) | n.a. |
| D001 Ignitable Reactives based on 261.21(a)(2) | WTRRX CHOXD CHRED STABL INCIN | n.a. |
| D001 Ignitable Oxidizers based on 261.21(a)(4) | CHRED INCIN | CHRED INCIN |
| D002 Acid Subcategory based on 261.22(a)(1) with pH less than or equal to 2 | RCORR NEUTR INCIN | NEUTR INCIN |
| D002 Alkaline Subcategory based on 261.22(a)(1) with pH greater than or equal to 12.5 | NEUTR INCIN | NEUTR INCIN |
| D002 Other Corrosives based on 261.22(a)(2) | CHOXD CHRED INCIN STABL | CHOXD CHRED INCIN |
| D003 Water Reactives based on 261.23(a) (2), (3), and (4) | INCIN WTRRX CHOXD CHRED | n.a. |
| D003 Reactive Sulfides based on 261.23(a)(5) | CHOXD CHRED INCIN STABL | CHOXD CHRED BIODG INCIN |

| | | |
|---|-------------------------|---|
| D003 Explosives based on 261.23(a) (6), (7), and (8) | INCIN CHOXD CHRED | INCIN CHOXD CHRED BIODG CARBN |
| D003 Other Reactives based on 261.23(a)(1) | INCIN CHOXD CHRED | INCIN CHOXD CHRED BIODG CARBN |
| K044 Wastewater treatment sludges from the manufacturing and processing of explosives | CHOXD CHRED INCIN | CHOXD CHRED BIODG CARBN INCIN |
| K045 Spent carbon from the treatment of wastewaters containing explosives | CHOXD CHRED INCIN | CHOXD CHRED BIODG CARBN INCIN |
| K047 Pink/red water from TNT operations | CHOXD CHRED INCIN | CHOXD CHRED BIODG CARBN INCIN |

FOOTNOTE: Note: "n.a." stands for "not applicable"; "b." stands for "followed by".

Appendix VII to Part 268 - LDR Effective Dates of Surface Disposed Prohibited Hazardous Wastes

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 ^e | All..... | July 8, 1996. |
| D003..... | Newly identified surface-disposed elemental phosphorus processing wastes. | May 26, 2000. |
| D004..... | Nonwastewater..... | May 8, 1992. |
| D004..... | Wastewater..... | Aug. 8, 1992. |
| D004..... | Newly identified D004 and mineral processing wastes. | August 24, 1998. |
| D004..... | Mixed radioactive/newly identified D004 or mineral processing wastes. | May 26, 1998. |
| D005..... | All..... | Aug. 8, 1990. |
| D005..... | Newly identified D005 and mineral processing wastes. | August 24, 1998. |
| D005..... | Mixed radioactive/newly identified D005 or mineral processing wastes. | May 26, 2000. |
| D006..... | All..... | Aug. 8, 1990. |
| D006..... | Newly identified D006 and mineral processing wastes. | August 24, 1998. |
| D006..... | Mixed radioactive/newly identified D006 or mineral processing wastes. | May 26, 2000. |
| D007..... | All..... | Aug. 8, 1990. |
| D007..... | Newly identified D007 and mineral processing wastes. | August 24, 1998. |
| D007..... | Mixed radioactive/newly identified D007 or mineral processing wastes. | May 26, 2000. |
| D008..... | Lead materials before secondary smelting..... | May 8, 1992. |
| D008..... | All others..... | Aug. 8, 1990. |
| D008..... | Newly identified D008 and mineral processing wastes. | August 24, 1998. |
| D008..... | Mixed radioactive/newly identified D008 or mineral processing wastes. | May 26, 2000. |
| D009..... | Nonwastewater..... | May 8, 1992. |
| D009..... | All others..... | Aug. 8, 1990. |
| D009..... | Newly identified D009 and mineral processing wastes. | August 24, 1998. |
| D009..... | Mixed radioactive/newly identified D009 or mineral processing wastes. | May 26, 2000. |
| D010..... | All..... | Aug. 8, 1990. |
| D010..... | Newly identified D010 and mineral processing | August 24, 1998. |

| | | |
|--|---|------------------|
| | wastes. | |
| D010 | Mixed radioactive/newly identified D010 or mineral processing wastes. | May 26, 2000. |
| D011 | All | Aug. 8, 1990. |
| D011 | Newly identified D011 and mineral processing wastes. | August 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 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-trichloroethane) | 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, | Nov. 8, 1988. |

| | | |
|--|--|------------------|
| | solvent-containing sludges and solids. | |
| 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..... | May 12, 1999. |
| F032..... | All others..... | August 12, 1997. |
| F034..... | Mixed with radioactive wastes..... | May 12, 1999. |
| F034..... | All others..... | August 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 | Al | Aug. 8, 1988. |
| K017 | All | Aug. 8, 1990. |
| K018 | All | Aug. 8, 1988. |
| K019 | Al | Aug. 8, 1988. |
| K020 | Al | 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 | 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 waste | October 8, 1997. |
| K088 | All others | Jan. 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 | Al | 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 other | Nov. 9, 1992. |
| K112 | Mixed with radioactive wastes | June 30, 1994. |
| K112 | All other | Nov. 9, 1992. |
| K113 | All | June 8, 1989. |
| K114 | Al | 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, January 1, 1998. |
| K160 | All others | July 8, 1996. |
| K161 | Mixed with radioactive wastes | Apr. 8, January 1, 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 | 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 waste | 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. |

^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.

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

^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.

^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.

^e The standards for selected reactive wastes was 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 or RCRA corrective actions. | Nov. 8, 1988. |
| 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 K147-151 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. | October 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..... | April 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. | August 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.
(Amended August 21, 1997, August 23, 1999)

Appendix VIII to Part 268--LDR Effective Dates of National Capacity LDR Variances for UIC Wastes

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 wastes | Apr. 8, 1998. |
| 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, 1992. |
| 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. |
| 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 processing 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. |

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

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

^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.

(Amended August 23, 1999)

Appendix IX -- Extraction Procedure (EP) Toxicity Test Method and Structural Integrity Test (Method 1310)

Note: The EP (Method 1310) is published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11 of these regulations.

Appendix X - [Reserved]

Appendix XI - Metal Bearing Wastes Prohibited From Dilution in a Combustion Unit According to §268.3(c)¹

| Waste code | Waste description |
|------------|---|
| D004..... | Toxicity Characteristic for Arsenic. |
| D005..... | Toxicity Characteristic for Barium. |
| D006..... | Toxicity Characteristic for Cadmium. |
| D007..... | Toxicity Characteristic for Chromium. |
| D008..... | Toxicity Characteristic for Lead. |
| D009..... | Toxicity Characteristic for Mercury. |
| D010..... | Toxicity Characteristic for Selenium. |
| D011..... | Toxicity Characteristic for Silver. |
| F006..... | Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum. |
| F007..... | Spent cyanide plating bath solutions from electroplating operations. |
| F008..... | Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process. |
| F009..... | Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process. |
| F010..... | Quenching bath residues from oil baths from metal treating operations where cyanides are used in the process. |
| F011..... | Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations. |
| F012..... | Quenching waste water treatment sludges from metal heat treating operations where cyanides are used in the process. |
| F019..... | Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum car washing when such phosphating is an exclusive conversion coating process. |
| K002..... | Wastewater treatment sludge from the production of chrome yellow and orange pigments. |
| K003..... | Wastewater treatment sludge from the production of molybdate orange pigments. |
| K004..... | Wastewater treatment sludge from the production of zinc yellow pigments. |
| K005..... | Wastewater treatment sludge from the production of chrome green pigments. |
| K006..... | Wastewater treatment sludge from the production of chrome oxide green |

| | |
|-----------|---|
| | pigments (anhydrous and hydrated). |
| K007..... | Wastewater treatment sludge from the production of iron blue pigments. |
| K008..... | Oven residue from the production of chrome oxide green pigments. |
| K061..... | Emission control dust/sludge from the primary production of steel in electric furnaces. |
| K069..... | Emission control dust/sludge from secondary lead smelting. |
| K071..... | Brine purification muds from the mercury cell processes in chlorine production, where separately prepurified brine is not used. |
| K100..... | Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting. |
| K106..... | Sludges from the mercury cell processes for making chlorine. |
| P010..... | Arsenic acid H_3AsO_4 |
| P011..... | Arsenic oxide As_2O_5 |
| P012..... | Arsenic trioxide |
| P013..... | Barium cyanide |
| P015..... | Beryllium |
| P029..... | Copper cyanide $\text{Cu}(\text{CN})$ |
| P074..... | Nickel cyanide $\text{Ni}(\text{CN})_2$ |
| P087..... | Osmium tetroxide |
| P099..... | Potassium silver cyanide |
| P104..... | Silver cyanide |
| P113..... | Thallic oxide |
| P114..... | Thallium (I) selenite |
| P115..... | Thallium (I) sulfate |
| P119..... | Ammonium vanadate |
| P120..... | Vanadium oxide V_2O_5 |
| P121..... | Zinc cyanide. |
| U032..... | Calcium chromate. |
| U145..... | Lead phosphate. |
| U151..... | Mercury. |
| U204..... | Selenious acid. |
| U205..... | Selenium disulfide. |
| U216..... | Thallium (I) chloride. |
| U217..... | Thallium (I) nitrate. |

¹ A combustion unit is defined as any thermal technology subject to Part 264, Subpart O; Part 265, Subpart O; and/or 266, Subpart H.