

DRAFT PROPOSED RULES

WYOMING DEPARTMENT OF ENVIRONMENTAL
QUALITY

SOLID AND HAZARDOUS WASTE DIVISION

HAZARDOUS WASTE MANAGEMENT

CHAPTER 13

LAND DISPOSAL RESTRICTIONS

2007

DEPARTMENT OF ENVIRONMENTAL QUALITY
SOLID AND HAZARDOUS WASTE DIVISION

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CHAPTER 13
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Bold = State added language ^ = Federal Language deleted

DEPARTMENT OF ENVIRONMENTAL QUALITY
SOLID AND HAZARDOUS WASTE DIVISION

HAZARDOUS WASTE MANAGEMENT

CHAPTER 13

LAND DISPOSAL RESTRICTIONS

268/Subpart A Section 1. GENERAL.

268.1 (a) PURPOSE, SCOPE AND APPLICABILITY.

268.1(a) (i) This Chapter 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.

268.1(b) (ii) Except as specifically provided otherwise in this Chapter or Chapter 2 of these rules and regulations, the requirements of this Chapter apply to persons who generate or transport hazardous waste and owners and operators of hazardous waste treatment, storage, and disposal facilities.

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

268.1(c) (1) (A) Where persons have been granted an extension to the effective date of a prohibition under Section 3 of this Chapter or pursuant to Section 1(e) of this Chapter, with respect to those wastes covered by the extension;

268.1(c)(2) (B) Where persons have been granted an exemption from a prohibition pursuant to a petition under Section 1(f) of this Chapter, with respect to those wastes and units covered by the petition;

268.1(c)(3) (C) Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited from land disposal under this Chapter, or 40 CFR part 148, are not prohibited from land disposal if the wastes:

...(i) (I) Are disposed into a nonhazardous or hazardous injection well as defined in 40 CFR part 146.6(a); and

...(ii) (II) Do not exhibit any prohibited characteristic of hazardous waste identified in Chapter 2, Section 3 of these rules and regulations at the point of injection

268.1(c)(4) (D) Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under Section 4 3 of this Chapter, are not prohibited if the wastes meet any of the following criteria, unless the wastes are subject to a specified method of treatment other than DEACT in Section 4(a) of this Chapter or are D003 reactive cyanide:

...(i) (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) (II) The wastes are treated for purposes of

the pretreatment requirements of Section 307 of the Clean Water Act;
or

- ...(iii) (III) The wastes are managed in a zero discharge system engaged in Clean Water Act-equivalent treatment as defined in Section 3(h)(i) of this Chapter;
- ...(iv) (IV) The wastes no longer exhibit a prohibited characteristic at the point of land disposal (i.e., placement in a surface impoundment).
- 268.1(d) (iv) The requirements of this Chapter shall not affect the availability of a waiver under Section 121(d)(4) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)].
- 268.1(e) (v) The following hazardous wastes are not subject to any provision of this Chapter:
- 268.1(e)(1) (A) 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 Chapter 2, Section 1(e) of these rules and regulations;
- 268.1(e)(2) (B) Waste pesticides that a farmer disposes of pursuant to Chapter 8, Section 7(a) of these rules and regulations;
- 268.1(e)(3) (C) Wastes identified or listed as hazardous after November 8, 1984 for which the ~~Department~~ EPA has not promulgated land disposal prohibitions or treatment standards: or
- 268.1(e)(4) (D) De minimis losses of characteristic wastes to wastewaters are not considered to be prohibited wastes and are defined as:
- ...(I) ~~(I) Losses from normal material handling operations (e.g. spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; and relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; rinsate from empty containers or from containers that are rendered empty by that rinsing; and laboratory wastes not exceeding one per cent of the total flow of wastewater into the facility's headworks on an annual basis, or with a combined annualized average concentration not exceeding one part per million in the headworks of the facility's wastewater treatment or pretreatment facility.;~~
- ...(II) ~~(II) Decharacterized wastes which are injected into Class I nonhazardous wells which wastes combined volume is less than one per cent of the total flow at the wellhead on an annualized basis, is no greater than 10,000 gallons per day, and in which any underlying hazardous constituents in the characteristic wastes are present at the point of generation at levels less than ten times the treatment standards found at Section 4(h) of this Chapter.~~
- 268.1(e)(5) (E) RESERVED

- 268.1(f) (vi) Universal waste handlers and universal waste transporters (as defined in Chapter 1, Section 1(f)(i) of these rules and regulations) are exempt from Section 1(g) and Section 5(a) of this Chapter for the hazardous wastes listed below. These handlers are subject to regulation under Chapter 14 of these rules and regulations.
- ... (i) (A) Batteries as described in Chapter 14, Section 1(b) of these rules and regulations;
- ... (ii) (B) Pesticides as described in Chapter 14, Section 1(c) of these rules and regulations;
- ... (iii) (C) Thermostats as described in Chapter 14, Section 1(d) of these rules and regulations; and
- ... (iv) (D) ~~Mercury~~ Lamps as described in Chapter 14, Section 1(e) of these rules and regulations.
- 268.2 (b) DEFINITIONS. ^ The following terms have the meaning defined in Chapter 1, Section 1(f)(i) of these rules and regulations when used in this Chapter: ~~"End of Pipe",~~ "Halogenated organic compounds," "Hazardous constituent or constituents," "Inorganic metal-bearing waste," "Land disposal," "Nonwastewaters," "Polychlorinated biphenyls or PCBs," "Soil", ~~"Stormwater impoundments",~~ "Wastewaters," "Debris," "Hazardous debris," and "Underlying hazardous constituent."
- 268.3 (c) DILUTION PROHIBITED AS A SUBSTITUTE FOR TREATMENT.
- 268.3(a) (i) Except as provided in Section 1(c)(ii) of this Chapter, 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 Section 4 of this Chapter, to circumvent the effective date of a prohibition in Section 3 of this Chapter, to otherwise avoid a prohibition in Section 3 of this Chapter, or to circumvent a land disposal prohibition imposed by Chapter 13, Section 3 and W.S. 35-11-503(d).
- 268.3(b) (ii) Dilution of wastes that are hazardous only because they exhibit a characteristic in a treatment system which includes 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 Section 1(c) of this Chapter unless a method other than DEACT has been specified in Section 4(a) of this Chapter as the treatment standard, or unless the waste is a D003 reactive cyanide wastewater or nonwastewater.
- 268.3(c) (iii) Combustion of the hazardous waste codes listed in Appendix K of this Chapter 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):
- 268.3(c)(1) (A) The waste contains hazardous organic constituents or cyanide at levels exceeding the constituent-specific treatment standard found in Section 4(h) of this Chapter;

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

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

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

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

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

268.3(d) (iv) 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.

268.4 (d) TREATMENT SURFACE IMPOUNDMENT EXEMPTION.

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

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

268.4(a)(2) (B) The following conditions are met:

...(i) (I) Sampling and testing. For wastes with treatment standards in Section 4 of this Chapter and/or prohibition levels in Section 3 of this Chapter and W.S. 35-11-503(d), the residues from treatment are analyzed, as specified in Section 1(g) of this Chapter or Section 3(c) of this Chapter, 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 Chapter 10, Section 2(d) or Chapter 11, Section 4(d) of these rules and regulations, must be designed such that representative samples of the sludge and the supernatant are tested separately rather than mixed to form homogeneous samples.

...(ii) (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 Section 4 of this Chapter; residues which do not meet the prohibition levels established under Section 3 of this Chapter or imposed by statute (where no treatment standards have been established); residues which are from the treatment of wastes prohibited from land disposal under Section 3 of this Chapter (where no treatment standards have been established and no prohibition levels apply); or residues from managing listed wastes which are not

delisted under Chapter 1, Section 3(c) of these rules and regulations. ~~However, residues which are the subject of a valid certification under Section 1(h) of this Chapter made no later than a year after placement of the wastes in an impoundment are not required to be removed annually.~~ If the volume of liquid flowing through the impoundment or series of impoundments annually is greater than the volume of the impoundment or impoundments, this flow-through constitutes removal of the supernatant for the purpose of this requirement.

...(iii) (III) Subsequent management. Treatment residues may not be placed in any other surface impoundment for subsequent management ~~unless the residues are the subject of a valid certification under Section 1(h) of this Chapter which allows disposal in surface impoundments meeting the requirements of Section 1(h)(i) of this Chapter.~~

...(iv) (IV) Recordkeeping. ~~The procedures and schedule for the sampling of impoundment contents, the analysis of test data, and the annual removal of residues which do not meet the treatment standards, or prohibition levels (where no treatment standards have been established), or which are from the treatment of wastes prohibited from land disposal under Section 3 of this Chapter (where no treatment standards have been established and no prohibition levels apply), must be specified in the facility's waste analysis plan as required under Chapter 10, Section 2(d) or Chapter 11, Section 4(d) of these rules and regulations. Sampling and testing and recordkeeping provisions of Chapter 10, Section 2(d) and Chapter 11, Section 4(d) of these rules and regulations apply.~~

268.4(a)(3) (C) The impoundment meets the design requirements of Chapter 10, Section 10(b)(iii) or Chapter 11, Section 12(b)(i) of these rules and regulations, regardless that the unit may not be new, expanded, or a replacement, and be in compliance with applicable ground water monitoring requirements of Chapter 10, Section 6 or Chapter 11, Section 8 of these rules and regulations unless:

...(i) (I) Exempted pursuant to Chapter 10, Section 10(b)(iv) or (v) of these rules and regulations, or to Chapter 11, Section 12(b)(iii) or (iv) of these rules and regulations; or,

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

...(ii)(A) (1.) Has at least one liner, for which there is no evidence that such liner is leaking;

...(ii)(B) (2.) Is located more than one-quarter mile from an underground source of drinking water; and

...(ii)(C) (3.) Is in compliance with generally applicable ground water monitoring requirements for facilities with permits; or,

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

future time.

268.4(a)(4) (D) The owner or operator submits to the Director a written certification that the requirements of Section 1(d)(i)(C) of this Chapter have been met ~~and submits a copy of the waste analysis plan required under Section 1(d)(i)(B) of this Chapter~~. The following certification is required:

I certify under penalty of law that the requirements of Chapter 13, Section 1(d)(i)(C) of the Wyoming Hazardous Waste Management Rules and 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.

268.4(b) (ii) Evaporation of hazardous constituents as the principal means of treatment is not considered to be treatment for purposes of an exemption under Section 1(d) of this Chapter.

268.5 (e) PROCEDURES FOR CASE-BY-CASE EXTENSIONS TO AN EFFECTIVE DATE.

268.5(a) (i) Any person who generates, treats, stores, or disposes of a hazardous waste may submit an application to the EPA Administrator for an extension to the effective date of any applicable restriction established under Section 3 of this Chapter. The applicant must demonstrate the following:

268.5(a)(1) (A) He or she has made a good-faith effort to locate and contract with treatment, recovery, or disposal facilities nationwide to manage his or her waste in accordance with the effective date of the applicable restriction established under Section 3 of this Chapter;

268.5(a)(2) (B) He or she 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 Section 4 of this Chapter or, where treatment standards have not been specified, such treatment, recovery, or disposal capacity is protective of human health and the environment.

268.5(a)(3) (C) 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;

268.5(a)(4) (D) 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;

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

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

- 268.5(a)(7) (G) Any waste managed in a surface impoundment or landfill during the extension period will meet the requirements of Section 1(e)(viii)(B) of this Chapter.
- 268.5(b) (ii) An authorized representative signing an application described under Section 1(e)(i) of this Chapter 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.
- 268.5(c) (iii) After receiving an application for an extension, the EPA Administrator may request any additional information which he or she deems as necessary to evaluate the application.
- 268.5(d) (iv) 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.
- 268.5(e) (v) On the basis of the information referred to in Section 1(e)(i) of this Chapter, after notice and opportunity for comment, and after consultation with appropriate State agencies in all affected States, the EPA Administrator may grant an extension of up to 1 year from the effective date. The EPA Administrator may renew this extension for up to 1 additional year upon the request of the applicant if the demonstration required in Section 1(e)(i) of this Chapter can still be made. In no event will an extension extend beyond 24 months from the applicable effective date specified in Section 3 of this Chapter. The length of any extension authorized will be determined by the EPA 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 Section 1(e)(i)(E) of this Chapter. The EPA 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.
- 268.5(f) (vi) Any person granted an extension under Section 1(e) of this Chapter must immediately notify the EPA Administrator as soon as he or she has knowledge of any change in the conditions certified to in the application.
- 268.5(g) (vii) Any person granted an extension under Section 1(e) of this Chapter shall submit written progress reports at intervals designated by the EPA 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 EPA 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 rules and regulations.
- 268.5(h) (viii) Whenever the EPA Administrator establishes an

extension to an effective date under Section 1(e) of this Chapter, during the period for which such extension is in effect:

- 268.5(h)(1) (A) The storage restrictions under Section 5(a) of this Chapter do not apply; and
- 268.5(h)(2) (B) 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) (I) The landfill, if in interim status, is in compliance with the requirements of Chapter 11, Section 8 and Chapter 11, Sections 15(b)(i), 15(b)(iii), and 15(b)(iv) of these rules and regulations; or,
- ...(ii) (II) The landfill, if permitted, is in compliance with the requirements of Chapter 10, Sections 6 and 13(b)(iii), (iv) and (v) of these rules and regulations; or
- ...(iii) (III) The surface impoundment, if in interim status, is in compliance with the requirements of Chapter 11, Section 8 and Chapter 11, 12(b)(i), 12(b)(iii), and 12(b)(iv) of these rules and regulations; RCRA Section 3005(j)(1); and W.S. 35-11-503(d) or
- ...(iv) (IV) The surface impoundment, if permitted, is in compliance with the requirements of Chapter 10, Sections 6 and 10(b)(iii), (iv) and (v) of these rules and regulations; or
- ...(v) (V) The surface impoundment, if newly subject to RCRA Section 3005(j)(1) and W.S. 35-11-503(d) due to the promulgation of additional listings or characteristics for the identification of hazardous waste, is in compliance with the requirements of Chapter 11, Section 8 of these rules and regulations within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of Chapter 11, Sections 12(b)(i), 12(b)(iii), and 12(b)(iv) of these rules and regulations within 48 months after the promulgation of additional listings or characteristics of hazardous waste. If a national capacity variance is granted, during the period the variance is in effect, the surface impoundment, if newly subject to RCRA Section 3005(j)(1) and W.S. 35-11-503(d) due to the promulgation of additional listings or characteristics of hazardous waste, is in compliance with the requirements of Chapter 11, Section 8 of these rules and regulations within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of Chapter 11, Sections 12(b)(i), 12(b)(iii) and 12(b)(iv) of these rules and regulations within 48 months after the promulgation of additional listings or characteristics of hazardous waste; or
- ...(vi) (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 part 761.75 and Chapter 5, Chapter 10, and Chapter 11, Section 1 and Sections 4 through 31 of these rules and regulations.
- 268.5(i) (ix) Pending a decision on the application the applicant is required to comply with all restrictions on land disposal under this Chapter once the effective date for the waste has been reached.

268.6 (f) PETITIONS TO ALLOW LAND DISPOSAL OF A WASTE PROHIBITED UNDER SECTION 3 OF THIS CHAPTER.

268.6(a) (i) Any person seeking an exemption from a prohibition under Section 3 of this Chapter for the disposal of a restricted hazardous waste in a particular unit or units must submit a petition to the EPA 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:

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

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

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

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

268.6(a)(5) (E) Sufficient information to assure the EPA 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.

268.6(b) (ii) The demonstration referred to in Section 1(f)(i) of this Chapter must meet the following criteria:

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

268.6(b)(2) (B) 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;

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

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

268.6(b)(5) (E) 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.

268.6(c) (iii) Each petition referred to in Section 1(f)(i) of this Chapter must include the following:

268.6(c)(1) (A) 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) (I) The media monitored in the cases where monitoring of the environment around the unit is required;
 - ...(ii) (II) The type of monitoring conducted at the unit, in the cases where monitoring of the unit is required;
 - ...(iii) (III) The location of the monitoring stations;
 - ...(iv) (IV) The monitoring interval (frequency of monitoring at each station);
 - ...(v) (V) The specific hazardous constituents to be monitored;
 - ...(vi) (VI) The implementation schedule for the monitoring program;
 - ...(vii) (VII) The equipment used at the monitoring stations;
 - ...(viii) (VIII) The sampling and analytical techniques employed; and
 - ...(ix) (IX) The data recording/reporting procedures.
- 268.6(c)(2) (B) Where applicable, the monitoring program described in Section 1(f)(iii)(A) of this Chapter must be in place for a period of time specified by the EPA Administrator, as part of his or her approval of the petition, prior to receipt of prohibited waste at the unit.
- 268.6(c)(3) (C) The monitoring data collected according to the monitoring plan specified under Section 1(f)(iii)(A) of this Chapter must be sent to the EPA Administrator according to a format and schedule specified and approved in the monitoring plan, and
- 268.6(c)(4) (D) A copy of the monitoring data collected under the monitoring plan specified under Section 1(f)(iii)(A) of this Chapter must be kept on-site at the facility in the operating record.
- 268.6(c)(5) (E) The monitoring program specified under Section 1(f)(iii)(A) of this Chapter meet the following criteria:
- ...(i) (I) All sampling, testing, and analytical data must be approved by the EPA Administrator and must provide data that is accurate and reproducible.
 - ...(ii) (II) All estimation and monitoring techniques must be approved by the EPA Administrator.
 - ...(iii) (III) A quality assurance and quality control plan addressing all aspects of the monitoring program must be provided to and approved by the EPA Administrator.

- 268.6(d) (iv) Each petition must be submitted to the EPA Administrator.
- 268.6(e) (v) 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:
- 268.6(e)(1) (A) 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 EPA Administrator at least 30 days prior to making the change. The EPA 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 EPA Administrator prior to being made.
- 268.6(e)(2) (B) 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 EPA Administrator within 10 days of discovering the change. The EPA 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.
- 268.6(f) (vi) If the owner or operator determines that there is migration of hazardous constituent(s) from the unit, the owner or operator must:
- 268.6(f)(1) (A) Immediately suspend receipt of prohibited waste at the unit, and
- 268.6(f)(2) (B) Notify the EPA Administrator, in writing, within 10 days of the determination that a release has occurred.
- 268.6(f)(3) (C) Following receipt of the notification the EPA 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 EPA Administrator shall also determine whether further examination of any migration is warranted under applicable provisions of Chapter 5 and either Chapter 10 or Chapter 11, Section 1 and Sections 4 through 31 of these rules and regulations.
- 268.6(g) (vii) 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.
- 268.6(h) (viii) After receiving a petition, the EPA Administrator may request any additional information that reasonably may be required to evaluate the demonstration.
- 268.6(i) (ix) 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.

- 268.6(j) (x) The EPA 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.
- 268.6(k) (xi) The term of a petition granted under Section 1(f) of this Chapter ~~[this Section]~~ shall be no longer than the term of the State hazardous waste management facility permit if the disposal unit is operating under a State hazardous waste management facility permit, or up to a maximum of 10 years from the date of approval provided under Section 1(f)(vii) of this Chapter 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 State hazardous waste management facility 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.
- 268.6(l) (xii) Prior to the EPA Administrator's decision, the applicant is required to comply with all restrictions on land disposal under this Chapter once the effective date for the waste has been reached.
- 268.6(m) (xiii) The petition granted by the EPA Administrator does not relieve the petitioner of his or her responsibilities in the management of hazardous waste under Chapter 1, Sections 1(a)-1(j) and Section 3; Chapter 2; Chapter 3; Chapter 4; Chapter 5; Chapter 6; Chapter 7; Chapters 8 through 11; Chapter 12, Sections 1 through 8, 19 and 20; and Chapter 13 of these rules and regulations.
- 268.6(n) (xiv) Liquid hazardous wastes containing polychlorinated biphenyls at concentrations greater than or equal to 500 ppm are not eligible for an exemption under Section 1(f) of this Chapter.
- 268.7 (g) ~~Waste analysis and recordkeeping~~ TESTING, TRACKING, AND RECORDKEEPING REQUIREMENTS FOR GENERATORS, TREATERS, AND DISPOSAL FACILITIES
- 268.7(a) (i) ~~Except as specified in Section 3(c) of this Chapter, if a generator's waste is listed in Chapter 2, Section 4 of these rules and regulations, the generator must test his or her waste, or test an extract using the Toxicity Characteristic Leaching Procedure, Method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Chapter 1, Section 1(g)(i)(L) of these rules and regulations, or use knowledge of the waste, to determine if the waste is restricted from land disposal under this Chapter. Except as specified in Section 3(c) of this Chapter, if a generator's waste exhibits one or more of the characteristics set out at Chapter 2, Section 3 of these rules and regulations, the generator must test an extract using test method 1311 (The Toxicity Characteristic Leaching Procedure, described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846), or use knowledge of the waste, to determine if the waste is restricted from land disposal under this Chapter. If the generator determines that his or her waste exhibits the characteristic of ignitability (D001) (and is not in the High TOC Ignitable Liquids Subcategory or is not treated by CMBST or RORGS of Section 4(c), Table 1 of this Chapter), and/or~~

the characteristic of organic toxicity (D012 — D043), and is prohibited under Sections 3(h), (i), and (j) of this Chapter, the generator must determine the underlying hazardous constituents (as defined in Chapter 1, Section 1(f)(i) of these rules and regulations), in the D001, D002, D003 or D012-D043 wastes. Requirements for generators:

268.7(a)(1) (A) ~~If a generator determines that he or she is managing a restricted waste under this Chapter and the waste does not meet the applicable treatment standards set forth in Section 4 of this Chapter or it exceeds the applicable prohibition levels set forth in Section 3(c) of this Chapter and W.S. 35-11-503(d), with each shipment of waste the generator must notify the treatment or storage facility in writing. The notice must include the following information:~~ 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 Sections 4(a), (f) and (j) of this Chapter. 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 of the waste obtained using test method 1311 in "Test Methods of Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as referenced in Chapter 1, Section 1(g)(i)(K) of these rules and 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 Section 4(a) of this Chapter, and are described in detail in Section 4(c)(i)/Table 1 of this Chapter. These wastes, and solids 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 contamination with a waste, that displays a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity, they must comply with the special requirements of Section 1(i) of this Chapter in addition to any applicable requirements in this Section.

~~...(i) (I) EPA Hazardous Waste Number;~~

~~...(ii) (II) The waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for wastes F001-F005, F039, D001, D002, D003 and D012-D043. Generators must also include whether the waste is a nonwastewater or wastewater (as defined in Chapter 1, Section 1(f)(i) of these rules and regulations), and indicate the subcategory of the waste (such as "D003 reactive cyanide"), if applicable.~~

~~...(iii) (III) The manifest number associated with the shipment of waste;~~

~~...(iv) (IV) For hazardous debris, the contaminants subject to treatment as provided by Section 4(f)(ii) and the following statement: This hazardous debris is subject to the alternative treatment standards of Section 4(f) of this Chapter; and~~

~~...(iv)(A) (1.) The contaminants subject to treatment, as described in Section 4(f)(ii) of this Chapter; and~~

~~... (iv) (B) (2.) An indication that these contaminants are being treated to comply with Section 4(f) of this Chapter; and.~~

~~... (v) (V) The waste analysis data, where available; and,~~

268.7(a)(2) (B) ~~If a generator determines that he or she is managing a restricted waste under this Chapter, and determines that the waste can be land disposed without further treatment, with each shipment of waste he or she must submit, to the treatment, storage, or land disposal facility, a notice and a certification stating that the waste meets the applicable treatment standards set forth in Section 4 of this Chapter and the applicable prohibition levels set forth in Section 3(c) of this Chapter and W.S. 35-11-503(d). Generators of hazardous debris that is excluded from the definition of hazardous waste under Chapter 2, Section 1(c)(vi)(B) of these rules and regulations (i.e., debris that the Director has determined does not contain hazardous waste), however, are not subject to these notification and certification requirements. 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 "Sec.1(g)(i)(B)" of the Generator Paperwork Requirements Table in Section 1(g)(i)(D) of this Chapter. 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) (I) The notice must include the following information: 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 Chapter 13, Section 4(j)(iii) of the Wyoming Hazardous Waste Management Rules and Regulations.

~~... (i) (A) (1.) EPA Hazardous Waste Number;~~

~~... (i) (B) (2.) The waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for wastes F001-F005, F039, D001, D002, D003 and D012-D043. Generators must also include whether the waste is a nonwastewater or wastewater (as defined in Chapter 1, Section 1(f)(i) of these rules and regulations), and indicate the subcategory of the waste (such as "D003 reactive cyanide"), if applicable;~~

~~... (i) (C) (3.) The manifest number associated with the shipment of waste;~~

~~... (i) (D) (4.) Waste analysis data, where available.~~

~~... (ii) (II) The certification must be signed by an authorized representative and must state the following: Reserved~~

~~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 Chapter 13, Section 4 of the Wyoming Hazardous Waste Management Rules and Regulations and all applicable prohibitions set forth in Chapter 13, Section 3(c) of the Wyoming Hazardous Waste Management Rules and Regulations and W.S. 35-11-503(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.~~

268.7(a)(3) (C) ~~If a generator's waste is subject to an exemption from a prohibition on the type of land disposal method utilized for the waste (such as, but not limited to, a case by case extension under Section 1(e) of this Chapter, an exemption under Section 1(f) of this Chapter, or a nationwide capacity variance under Section 3 of this Chapter), with each shipment of waste he or she must submit a notice to the facility receiving his or her waste stating that the waste is not prohibited from land disposal. The notice must include the following information: If the waste or contaminated soil meets the treatment standard at the original point of generation:~~

...(i) (I) ~~EPA Hazardous Waste Number; 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 "Sec. 1(g)(i)(C)" of the Generator Paperwork Requirements Table in Section 4(g)(i)(D) of this Chapter 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 Chapter 13, Section 4 of the Wyoming Hazardous Waste Management Rules and Regulations. 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) (II) ~~The waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for wastes F001 F005, F039, D001, D002, D003 and D012-D043. Generators must also include whether the waste is a nonwastewater or wastewater (as defined in Chapter 1, Section 1(f)(i) of these rules and regulations), and indicate the subcategory of the waste (such as "D003 reactive cyanide"), if applicable. 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 "Sec. 1(g)(i)(C)" of the Generator Paperwork Requirements Table in Section 1(g)(i)(D) of this Chapter.~~

...(iii) (III) ~~The manifest number associated with the shipment of waste; 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 Chapter 2, Section 1(c)(vi) of these rules and regulations are not subject to these requirements.

...~~(iv)~~ ~~(IV) Waste analysis data, where available;~~

...~~(v)~~ ~~(V) For hazardous debris, when using the alternative treatment technologies provided by Section 4(f) of this Chapter:~~

~~(1.) The contaminants subject to treatment, as described in Section 4(f)(ii) of this Chapter;~~

~~(2.) An indication that these contaminants are being treated to comply with Section 4(f) of this Chapter.~~

...~~(vi)~~ ~~(VI) For hazardous debris when using the treatment standards for the contaminating waste(s) in Section 4(a) of this Chapter: the requirements described in Sections 1(g)(i)(C)(I), (II), (III), (IV), and VII of this Chapter.~~

...~~(vii)~~ ~~(VII) The date the waste is subject to the prohibitions.~~

268.7(a)(4) (D) ~~If a generator is managing prohibited waste in tanks, containers, or containment buildings regulated under Chapter 8, Section 3(e) of these rules and regulations, and is treating such waste in such tanks, containers, or containment buildings to meet applicable treatment standards under Section 4 of this Chapter, the generator must develop and follow a written waste analysis plan which describes the procedures the generator will carry out to comply with the treatment standards. (Generators treating hazardous debris under the alternative treatment standards of Table 1, Section 4(f) of this Chapter, 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: 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 Section 1(e) of this Chapter, disposal in a no-migration unit under Section 1(f) of this Chapter, or a national capacity variance or case-by-case capacity variance under Section 3 of this Chapter. 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 "Sec. 1(g)(i)(D)" 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.~~

| <u>Table. Generator Paperwork Requirements Table</u> | | | | |
|---|------------------------|------------------------|------------------------|------------------------|
| <u>Required information</u> | <u>Sec. 1(g)(i)(B)</u> | <u>Sec. 1(g)(i)(C)</u> | <u>Sec. 1(g)(i)(D)</u> | <u>Sec. 1(g)(i)(I)</u> |
| <u>1. EPA Hazardous Waste Numbers and Manifest Number of first shipment</u> | <u>I</u> | <u>I</u> | <u>I</u> | <u>I</u> |

Table. Generator Paperwork Requirements Table

| <u>Required information</u> | <u>Sec.</u> <u>1(g)(i)(B)</u> | <u>Sec.</u> <u>1(g)(i)(C)</u> | <u>Sec.</u> <u>1(g)(i)(D)</u> | <u>Sec.</u> <u>1(g)(i)(I)</u> |
|---|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| <u>2. Statement: this waste is not prohibited from land disposal</u> | | | <u>I</u> | |
| <u>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</u> | <u>I</u> | <u>I</u> | | |
| <u>4. The notice must include the applicable wastewater/ nonwastewater category (see Chapter 1, Section 1(f)(i)) and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide)</u> | <u>I</u> | <u>I</u> | | |
| <u>5. Waste analysis data (when available)</u> | <u>I</u> | <u>I</u> | <u>I</u> | |
| <u>6. Date the waste is subject to the prohibition</u> | | | <u>I</u> | |
| <u>7. For hazardous debris, when treating with the alternative treatment technologies provided by Section 4(f) of this Chapter: the contaminants subject to treatment, as described in Section 4(f)(ii) of this Chapter; and an indication that these contaminants are being treated to comply with Section 4(f) of this Chapter .</u> | <u>I</u> | | <u>I</u> | |

Table. Generator Paperwork Requirements Table

| Required information | Sec. 1(g)(i)(B) | Sec. 1(g)(i)(C) | Sec. 1(g)(i)(D) | Sec. 1(g)(i)(I) |
|--|--------------------|--------------------|--------------------|--------------------|
| 8. For contaminated soil subject to LDRs as provided in Section 4(j)(i) of this Chapter, the constituents subject to treatment as described in Section 4(j)(iv) of this Chapter, 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 Section 4(j)(iii) of this Chapter or the universal treatment standards] | I | I | | |
| 9. A certification is needed (see applicable Section for exact wording) | | I | | I |

...~~(i)~~ ~~(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 Chapter, including the selected testing frequency.~~

...~~(ii)~~ ~~(II) Such plan must be filed with the Department a minimum of 30 days prior to the treatment activity, with delivery verified.~~

...~~(iii)~~ ~~(III) Wastes shipped off site **which have been managed and treated pursuant** to Section 1(g)(i) of this Chapter must comply with the notification requirements of Section 1(g)(i)(B) of this Chapter.~~

268.7(a)(5) (E) ~~If a generator determines whether the waste is restricted based solely on his or her knowledge of the waste, all supporting data used to make this determination must be retained on-site in the generator's files. If a generator determines whether the waste is restricted based on testing this waste or an extract developed using the test method described in Appendix A of this Chapter, all waste analysis data must be retained on-site in the generator's files.~~ If a generator is managing and treating prohibited waste or contaminated soil in tanks, containers, or containment buildings regulated under Chapter 8, Section 3(e) of these rules and regulations to meet applicable LDR treatment standards found at Section 4(a) of this Chapter, 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, Section 4(f) of this Chapter, 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)~~ (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 Chapter, including the selected testing frequency.

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

...(iii) (III) Wastes shipped off-site pursuant to this paragraph must comply with the notification requirements of Section 1(g)(i)(C) of this Chapter.

268.7(a)(6) ~~(F) If a generator determines that he or she is managing a restricted waste that is excluded from the definition of hazardous or waste material or exempt from W.S. 35-11-503(d) regulation, under Chapter 2, Sections 1(b) through 1(f) and Chapter 1, Section 1(f)(i) of these rules and regulations subsequent to the point of generation, he or she must place a one-time notice stating such generation, subsequent exclusion from the definition of hazardous or waste material or exemption from W.S. 35-11-503(d) regulation, and the disposition of the waste, in the facility's file. If a generator determines that the waste or contaminated soil is restricted based solely on his or her 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 Chapter 1, Section 1(g)(i)(K) of these rules and regulations, and all waste analysis data must be retained on-site in the generator's files.~~

268.7(a)(7) ~~(G) Generators must retain on site a copy of all notices, certifications, demonstrations, waste analysis data, and other documentation produced pursuant to Section 1(g) of this Chapter for at least five years from the date that the waste that is the subject of such documentation was last sent to on site or off site treatment, storage, or disposal. The five year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Director. The requirements of Section 1(g)(i) of this Chapter apply to waste materials even when the hazardous characteristic is removed prior to disposal, or when the waste is excluded from the definition of hazardous or waste material under Chapter 1, Section 1(f)(i) and Chapter 2, Sections 1(b) through 1(f) of these rules and regulations ^, subsequent to the point of generation. If a generator determines that he or she is managing a prohibited waste that is excluded from the definition of hazardous waste or waste material or is exempted from W.S. 35-11-503(d) under Chapter 2, Sections 1(b) through 1(f) of these rules and regulations 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 Chapter 2, Section 1(d)(i)(B) of these rules and regulations or that are CWA-equivalent, or are managed in an underground injection well regulated by the SDWA), he or she must place a one-time notice describing such generation, subsequent exclusion from the definition of hazardous waste or waste material or exemption from W.S. 35-11-503(d), and the disposition of the waste, in the facility's on-site files.~~

268.7(a)(8) ~~(H) If a generator is managing a lab pack that~~

~~contains none of the wastes specified in Appendix D of this Chapter, and wishes to use the alternative treatment standard under Section 4(c)(iii) of this Chapter, with each shipment of waste the generator must submit a notice to the treatment facility in accordance with Section 1(g)(i)(A) of this Chapter, except that underlying hazardous constituents need not be determined. The generator must also comply with the requirements in Section 1(g)(i)(E) and Section 1(g)(i)(F) of this Chapter, and must submit the following certification, which must be signed by an authorized representative:~~

~~I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack does not contain any wastes identified in Chapter 13, Appendix D of the Wyoming Hazardous Waste Management Rules and Regulations. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment. 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. 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 Director. The requirements of Section 1(g)(i)(H) of this Chapter apply to waste materials even when the hazardous characteristic is removed prior to disposal, or when the waste is excluded from the definition of hazardous waste or waste material under Chapter 2, Sections 1(b) through 1(f) of these rules and regulations, or exempted from W.S. 35-11-503(d), subsequent to the point of generation.~~

268.7(a)(9) (I) ~~Reserved.~~ If a generator is managing a lab pack containing hazardous wastes and wishes to use the alternative treatment standard for lab packs found at Section 4(c)(iii) of this Chapter:

...(i) (I) With the initial shipment of waste to a treatment facility, the generator must submit a notice that provides the information in column "Sec. 1(g)(i)(I)" in the Generator Paperwork Requirements Table of Section 1(g)(i)(D) of this Chapter, 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 Chapter 13, Appendix D of the Wyoming Hazardous Waste Management Rules and Regulations and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at Chapter 13, Section 4(c)(iii) of the Wyoming Hazardous Waste Management Rules and Regulations. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

...(ii) (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) (III) If the lab pack contains characteristic hazardous wastes (D001-D043), underlying hazardous constituents (as

defined in Chapter 1, Section 1(f)(i) of these rules and regulations [Sec. 268.2(i)] need not be determined.

... (iv) (IV) The generator must also comply with the requirements in Sections 1(g)(i)(F) and (G) of this Chapter [paragraphs (a)(6) and (a)(7) of this Section].

268.7(a)(10) (J) Small quantity generators with tolling agreements pursuant to Chapter 8, Section 2(a)(v) of these rules and regulations must comply with the applicable notification and certification requirements of Section 1(g)(i) of this Chapter 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 Director.

268.7(b) (ii) Treatment facilities must test their wastes according to the frequency specified in their waste analysis plans as required by Chapter 10, Section 2(d) (for permitted TSDs) or Chapter 11, Section 4(d) (for interim status facilities) of these rules and regulations. Such testing must be performed as provided in Sections 1(g)(ii)(A), (B), and (C) of this Chapter.

268.7(b)(1) (A) For wastes or contaminated soil with treatment standards expressed as concentrations in the waste extract (Section 4(a) of this Chapter), the owner or operator of the treatment facility must test an extract of the treatment residues, ~~or an extract of such residues developed using the test method described in Appendix A of this Chapter, 1311~~ (the Toxicity Characteristic Leaching Procedure, described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 referenced in Chapter 1, Section 1(g)(i) of these rules and regulations) to assure that the treatment residues ~~or~~ extract meet the applicable treatment standards.

~~268.7(b)(2) (B) For wastes that are prohibited under Section 3(c) of this Chapter and W.S. 35-11-503(d) but not subject to any treatment standards under Section 4 of this Chapter, the owner or operator of the treatment facility must test the treatment residues according to the generator testing requirements specified in Section 3(c) of this Chapter to assure that the treatment residues comply with the applicable prohibitions.~~

268.7(b)(32) (EB) For wastes or contaminated soil with treatment standards expressed as concentrations in the waste (Section 4(a) of this Chapter), the owner or operator of the treatment facility must test the treatment residues (not an extract of such residues) to assure that ~~the treatment residues~~ they meet the applicable treatment standards.

268.7(b)(43) (DC) ~~A notice must be sent with each waste shipment to the land disposal facility which includes the following information, except that debris excluded from the definition of hazardous waste under Chapter 2, Section 1(c)(vi) of these rules and regulations (i.e., debris treated by an extraction or destruction technology provided by Table 1, Section 4(f) of this Chapter, and debris that the Director has determined does not contain hazardous waste) is subject to the notification and certification requirements of Section 1(g)(iv) of this Chapter rather than these notification~~

~~requirements: 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) (I) ~~EPA Hazardous Waste Number; 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) (II) ~~The waste constituents to be monitored, if monitoring will not include all regulated constituents, for wastes F001-F005, F039, D001, D002, D003 and D012-D043. Generators must also include whether the waste is a nonwastewater or wastewater (as defined in Chapter 1, Section 1(f)(i) of these rules and regulations), and indicate the subcategory of the waste (such as D003 reactive cyanide), if applicable. The one-time notice must include these requirements:~~

Table. Treatment Facility Paperwork Requirements

| <u>Required Information</u> | <u>Sec. 1(g)(ii)</u> |
|---|----------------------|
| <u>1. EPA Hazardous Waste Numbers and Manifest Number of first shipment.....</u> | <u>T</u> |
| <u>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.....</u> | <u>T</u> |
| <u>3. The notice must include the applicable wastewater/nonwastewater category (see Chapter 1, Section 1(f)(i) of these rules and regulations) and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide).....</u> | <u>T</u> |
| <u>4. Waste analysis data (when available).....</u> | <u>T</u> |
| <u>5. For contaminated soil subject to LDRs as provided in Section 4(j)(i) of this Chapter, the constituents subject to treatment as described in Section 4(j)(iv) of this Chapter and the following statement, "this contaminated soil [does/does not] exhibit a characteristic of hazardous waste and [is subject to/complies with] the soil treatment standards as provided by Section 4(j)(iii) of this Chapter".....</u> | <u>T</u> |
| <u>6. A certification is needed (see applicable Section for exact wording).....</u> | <u>T</u> |

...(iii) ~~(III) The manifest number associated with the shipment of waste; and~~

...(iv) ~~(IV) Waste analysis data, where available.~~

268.7(b) (54) (ED) The treatment facility must submit a one-time certification signed by an authorized representative with the initial

~~each shipment of waste or treatment residue of a restricted waste to the land disposal facility, stating that the waste or treatment residue has been treated in compliance with the applicable performance standards specified in Section 4 of this Chapter and the applicable prohibitions set forth in Section 3(c) of this Chapter and W.S. 35-11-503(d). Debris excluded from the definition of hazardous waste under Chapter 2, Section 1(e)(vi) of these rules and regulations (i.e., debris treated by an extraction or destruction technology provided by Table 1, Section 4(f) of this Chapter, and debris that the Director has determined does not contain hazardous waste), however, is subject to the notification and certification requirements of Section 1(g)(iv) of this Chapter rather than the certification requirements of Section 1(g)(ii)(E) of this Chapter. The certification must state:~~

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards specified in Chapter 13, Section 4(a) of the Wyoming Hazardous Waste Management Rules and Regulations 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.

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 Chapter 13, Section 4(j) of the Wyoming Hazardous Waste Management Rules and Regulations without impermissible dilution of the prohibited wastes. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

...(i)

~~(I) For wastes with treatment standards expressed as concentrations in the waste extract or in the waste Section 4(a) of this Chapter, or for wastes prohibited under Section 3(c) of this Chapter and W.S. 35-11-503(d) which are not subject to any treatment standards under Section 4 of this Chapter, the certification must be signed by an authorized representative and must state the following: 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.~~

~~———— I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, based on my inquiry of those individuals immediately responsible for obtaining this information. I believe that the treatment process has been operated and maintained properly so as to comply with the performance levels specified in Section 4 of Chapter 13 of the Wyoming Hazardous Waste Management Rules and Regulations, and all applicable prohibitions set forth in Chapter 13, Section 3(c) of the Wyoming Hazardous Waste Rules and Regulations and W.S. 35-11-503(d) without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.~~

- ...(ii) (II) ~~For wastes with treatment standards expressed as technologies (Section 4(c) of this Chapter), the certification must be signed by an authorized representative and must state the following: Debris excluded from the definition of hazardous waste under Chapter 2, Section 1(c)(vi) of these rules and regulations (i.e., debris treated by an extraction or destruction technology provided by Section 4(f)/Table 1 of this Chapter, and debris that the Director has determined does not contain hazardous waste), however, is subject to the notification and certification requirements of Section 1(g)(iv) of this Chapter rather than the certification requirements of this paragraph.~~

~~———— I certify under penalty of law that the waste has been treated in accordance with the requirements of Section 4(c) of Chapter 13 of the Wyoming Hazardous Waste Management Rules and Regulations. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.~~

- ...(iii) (III) ~~For wastes with organic constituents having treatment standards expressed as concentrations levels in the waste pursuant to Section 4(d) of this Chapter, if compliance with the treatment standards in Section 4 of this Chapter is based in part or in whole on the analytical detection limit alternative specified in Section 4(a)(iv) of this Chapter, the certification signed by an authorized representative, also must state the following:~~

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification ~~and that,~~ based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by incineration in units operated in accordance with Chapter 10, Section 14) or Chapter 11, Section 16 combustion units as specified in Chapter 13, Section 4(c), Table 1. of the Wyoming Hazardous Waste Management Rules and Regulations, ~~or by combustion in fuel substitution units operating in accordance with applicable technical requirements,~~ and I have been unable to detect the nonwastewater organic constituents, despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

- ...(iv) (IV) ~~For characteristic wastes D001, D002, D003 and D012-D043 that are: subject to the treatment standards in Section 4(a) of this Chapter (other than those expressed as a required method of treatment); that are reasonably expected to contain underlying hazardous constituents as defined in Chapter 1, Section 1(f)(i) of these rules and regulations; 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:~~ For characteristic wastes that are subject to the treatment standards in Section 4(a) of this Chapter (other than those expressed as a method of treatment), or Section 4(j) of this Chapter, and that contain underlying hazardous constituents as defined in Chapter 1, Section 1(f)(i) of these rules and regulations; 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 Section 4(a) or (j) of Chapter 13 of the Wyoming Hazardous Waste Management Rules and Regulations to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet ~~universal~~ treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

... (v)

(V) For characteristic wastes ~~D001, D002, D003 and D012-D043~~ that contain underlying hazardous constituents as defined in Chapter 1, Section 1(f)(i) these rules and regulations that are treated on-site to remove the hazardous characteristic ~~and~~ to treat underlying hazardous constituents to levels in Section 4(h) of Chapter 13 of these rules and regulations ~~this Chapter~~ 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 Section 4(a) of Chapter 13 of the Wyoming Hazardous Waste Management Rules and Regulations to remove the hazardous characteristic, and that underlying hazardous constituents, as defined in Chapter 1, Section 1(f)(i) have been treated on-site to meet the Chapter 13, Section 4(h) of the Wyoming Hazardous Waste Management Rules and Regulations ~~this Chapter~~ Universal Treatment Standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

268.7(b) (65)

(~~FE~~) If the waste or treatment residue will be further managed at a different treatment or storage facility, the treatment, storage or disposal facility sending the waste or treatment residue off-site must comply with the notice and certification requirements applicable to generators under Section 1(g) of this Chapter.

268.7(b) (76)

(~~GF~~) Where the wastes are recyclable materials used in a manner constituting disposal subject to the provisions of Chapter 12, Section 3(a)(ii) of these rules and regulations 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 Section 1(g)(ii)(~~DC~~) of this Chapter. With each shipment of such wastes the owner or operator of the recycling facility must submit a certification described in Section 1(g)(ii)(~~ED~~) of this Chapter, and a notice which includes the information listed in Section 1(g)(ii)(~~DC~~) of this Chapter (except the manifest number) to the Director, or his or her delegated representative. The recycling facility also must keep records of the name and location of each entity receiving the hazardous waste-derived product.

268.7(c) (iii) Except where the owner or operator is disposing of any waste that is a recyclable material used in a manner constituting disposal pursuant to Chapter 12, Section 3(a)(ii) of these rules and regulations, the owner or operator of any land disposal facility disposing any waste subject to restrictions under this Chapter must:

268.7(c)(1) (A) Have copies of the notice and certifications specified in Section 1(g)(i) or (ii) of this Chapter, ~~and the certification specified in Section 1(h) of this Chapter if applicable.~~

268.7(c)(2) (B) Test the waste, or an extract of the waste or treatment residue developed using the test method 1311 (the Toxicity Characteristic Leaching Procedure) described in ~~Appendix A of this Chapter or using any methods required by generators under Section 3(c) of this Chapter~~ "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 as referenced in Chapter 1, Section 1 (g)(i) of these rules and regulations), to assure that the wastes or treatment residues are in compliance with the applicable treatment standards set forth in Section 4 of this Chapter ~~and all applicable prohibitions set forth in Section 3(c) of this Chapter~~. Such testing must be performed according to the frequency specified in the facility's waste analysis plan as required by Chapter 10, Section 2(d) or Chapter 11, Section 4(d) of these rules and regulations.

268.7(d) (iv) Generators or treaters who first claim that hazardous debris is excluded from the definition of hazardous waste under Chapter 2, Section 1(c)(vi) of these rules and regulations (i.e., debris treated by an extraction or destruction technology provided by Table 1, Section 4(f) of this Chapter, and debris that the Director has determined does not contain hazardous waste) are subject to the following notification and certification requirements:

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

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

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

... (iii) (III) For debris excluded under Chapter 2, Section 1(c)(vi)(A) of these rules and regulations, the technology from Table 1, Section 4(f) of this Chapter, used to treat the debris.

268.7(d)(2) (B) The notification must be updated if the debris is shipped to a different facility, and, for debris excluded under the Chapter 1, Section 1(f)(i) definition of "waste material" (paragraph (E)(I)) of these rules and regulations, if a different type of debris is treated or if a different technology is used to treat the debris.

268.7(d)(3) (C) For debris excluded under Chapter 2, Section 1(c)(vi)(A) of these rules and regulations, the owner or operator of the treatment facility must document and certify compliance with the treatment standards of Table 1, Section 4(f) of this Chapter, as follows:

... (i) (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) (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) (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 Section 4(f) of Chapter 13 of the Wyoming Hazardous Waste Management Rules and Regulations [~~40 CFR 268.45~~]. I am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment."

268.7(e) (v) Generators and treaters who first receive from ^ DEQ or an authorized state a determination that a given contaminated soil subject to LDRs as provided in Section 4(j)(i) of this Chapter no longer contains a listed hazardous waste and generators and treaters who first determine that a contaminated soil subject to LDRs as provided in Section 4(j)(i) of this Chapter no longer exhibits a characteristic of hazardous waste must:

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

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

268.8 (h) RESERVED

268.9 (i) SPECIAL RULES REGARDING WASTES THAT EXHIBIT A CHARACTERISTIC.

268.9(a) (i) The initial generator of a waste material must determine each EPA Hazardous Waste Number (waste code) applicable to the waste in order to determine the applicable treatment standards under Section 4 of this Chapter. For purposes of ~~this~~ Chapter 13 of these rules and regulations, the waste will carry the waste code for any applicable listed ~~ing~~ waste under (Chapter 2, Section 4 of these rules and regulations). In addition, where the waste exhibits a characteristic, the waste will carry one or more of the characteristic waste codes (Chapter 2, Section 3 of these rules and regulations), except when the treatment standard for the listed waste operates in lieu of the treatment standard for the characteristic waste, as specified in Section 1(i)(ii) of this Chapter. If the generator determines that their waste displays a hazardous characteristic (and is not D001 nonwastewaters treated by CMBST, RORGS, OR POLYM of Section 4(c), Table 1 of this Chapter), the generator must determine the underlying hazardous constituents (as defined at Chapter 1, Section 1(f)(i) of these rules and regulations) in the characteristic waste. ~~the waste will carry one or more of the waste codes under Chapter 2, Section 3 of these rules and regulations, where the waste exhibits a characteristic, except in the case when the treatment standard for the waste code listed in Chapter 2, Section 4 of these rules and regulations operates in lieu of the standard for the waste code under Chapter 2, Section 3 of these rules and regulations, as specified in Section 1(i)(ii) of this Chapter. If the generator determines that his or her waste displays a hazardous characteristic (and the waste is not a D004-D011 waste, a~~

~~High TOC D001, or is not treated by CMBST, or RORCS of Section 4(e), Table 1), the generator must determine what underlying hazardous constituents (as defined in Chapter 1, Section 1(f)(i) of these rules and regulations), are reasonably expected to be present above the universal treatment standards found in Section 4(h) of this Chapter.~~

268.9(b) (ii) Where a prohibited waste is both listed under Chapter 2, Section 4 of these rules and regulations and exhibits a characteristic under Chapter 2, Section 3 of these rules and regulations, the treatment standard for the waste code listed in Chapter 2, Section 4 of these rules and regulations will operate in lieu of the standard for the waste code under Section 3 of this Chapter, 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.

268.9(c) (iii) In addition to any applicable standards determined from the initial point of generation, no prohibited waste which exhibits a characteristic under Chapter 2, Section 3 of these rules and regulations may be land disposed unless the waste complies with the treatment standards under Section 4 of this Chapter.

268.9(d) (iv) Wastes that exhibit a characteristic are also subject to Section 1(g) of this Chapter requirements, except that once the waste is no longer hazardous, a one-time notification and certification must be placed in the generator's or treater's files and sent to the Director ~~except for those facilities discussed in Section 1(i)(vi) of this Chapter.~~ The notification and certification that is placed in the generator's or treater's files must be updated if the process or operation generating the waste changes and/or if the facility regulated under the Wyoming Solid Waste Rules and Regulations that is receiving the waste changes. However, the generator or treater need only notify the Director on an annual basis if such changes occur. Such notification and certification should be sent to the Director by the end of the calendar year, but no later than December 31.

268.9(d)(1) (A) The notification must include the following information:

...(i) (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 1 nonhazardous injection wells, the~~ The name and address of the facility regulated under the Wyoming Solid Waste Rules and Regulations receiving the waste shipment; and

...(ii) (II) ~~For all characteristic wastes, a description of the waste as initially generated, including the applicable EPA Hazardous Waste Number(s), treatability group(s), and underlying hazardous constituents. 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 Chapter 1, Section 1(f)(i) of these rules and regulations), 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.~~

- 268.9(d)(2) (B) The certification must be signed by an authorized representative and must state the language found in Section 1(g)(ii)(ED) of this Chapter.
- ...(i) (I) If treatment removes the characteristic but does not treat underlying hazardous constituents, then the certification found in Section 1(g)(ii)(ED)(IV) of this Chapter applies.
- ...(ii) (II) Reserved.
- ~~268.9(d)(3) (C) For characteristic wastes whose ultimate disposal will be into a Class I nonhazardous injection well, and compliance with the treatment standards found in Section 4(h) of this Chapter 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) (I) A description of the pollution prevention mechanism and when it was implemented if already complete;~~
- ~~...(ii) (II) The mass of each underlying hazardous constituent before pollution prevention;~~
- ~~...(iii) (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) (IV) The mass reduction of each underlying hazardous constituent that is achieved.~~
- ~~268.9(e) (v) For decharacterized wastes managed on site in a wastewater treatment system subject to the Clean Water Act (CWA) or zero dischargers engaged in CWA equivalent treatment, compliance with the treatment standards found at Section 4(h) of this Chapter 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.~~
- ~~268.9(f) (vi) 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 Chapter 1 Section 1(f)(i) of these rules and regulations), are addressed by a CWA permit, this compliance must be documented and this documentation must be kept in on site files.~~
- ~~268.9(g) (vii) For characteristic wastes whose ultimate disposal will be into a Class I nonhazardous injection well which qualifies for the de minimis exclusion described in Section 1(a) of this Chapter, information supporting that qualification must be kept in on site files.~~

268/Subpart B Section 2. SCHEDULE FOR LAND DISPOSAL PROHIBITION AND ESTABLISHMENT OF TREATMENT STANDARDS.

- 268.10 (a) RESERVED. ^
- 268.11 (b) RESERVED. ^
- 268.12 (c) RESERVED. ^
- 268.13 (d) RESERVED. ^

268.14 (e) SURFACE IMPOUNDMENT EXEMPTIONS.

268.14(a) (i) Section 2(e) of this Chapter defines additional circumstances under which an otherwise prohibited waste may continue to be placed in a surface impoundment.

268.14(b) (ii) Wastes which are newly identified or listed [^] after November 8, 1984, and stored in a surface impoundment that is newly subject to W.S. 35-11-503(d) as a result of the additional identification or listing, may continue to be stored in the surface impoundment for 48 months after the promulgation of the additional listing or characteristic, notwithstanding that the waste is otherwise prohibited from land disposal, provided that the surface impoundment is in compliance with the requirements of Chapter 11, Section 8 of these rules and regulations within 12 months after promulgation of the new listing or characteristic.

268.14(c) (iii) Wastes which are newly identified or listed [^] after November 8, 1984, and treated in a surface impoundment that is newly subject to W.S. 35-11-503(d) as a result of the additional identification or listing, may continue to be treated in that surface impoundment, notwithstanding that the waste is otherwise prohibited from land disposal, provided that surface impoundment is in compliance with the requirements of Chapter 11, Section 8 of these rules and 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 Section 1(d) of this Chapter.

268/Subpart C Section 3. PROHIBITIONS ON LAND DISPOSAL.

268.30 (a) WASTE SPECIFIC PROHIBITIONS -- SOLVENT WASTES.

268.30(a) (i) ~~Effective November 8, 1986, the spent solvent wastes specified in Chapter 2, Section 4(b) of these rules and regulations as EPA Hazardous Waste Nos. F001, F002, F003, F004, and F005, are prohibited under this Chapter from land disposal (except in an injection well) unless one or more of the following conditions apply:~~ Effective August 11, 1997, the following wastes are prohibited from land disposal: the wastes specified in Chapter 2 of these rules and regulations as EPA Hazardous Waste numbers F032, F034, and F035.

268.30(a)(1) ~~(A) The generator of the solvent waste is a small quantity generator of 100-1000 kilograms of hazardous waste per month; or~~

268.30(a)(2) ~~(B) The solvent waste is generated from any response action taken under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) or any corrective action taken under W.S. 35-11-503(d) or RCRA Section 3008(h), except where the waste is contaminated soil or debris; or~~

268.30(a)(3) ~~(C) The initial generator's solvent waste is a solvent/water mixture, solvent containing sludge or solid, or solvent contaminated soil (non CERCLA or corrective action taken under W.S. 35-11-503(d) or RCRA Section 3008(h)) containing less than 1 percent total F001-F005 solvent constituents listed in Table CCWE of Section 4(b) of this Chapter; or~~

268.30(a)(4) ~~(D) The solvent waste is a residue from treating a waste described in Sections 3(a)(i)(A), (B), or (C) of this Chapter; or the solvent waste is a residue from treating a waste not described in Sections 3(a)(i)(A), (B), or (C) of this Chapter provided such residue belongs to a different treatability group than the waste as initially generated and wastes belonging to such a treatability group are described in Section 3(a)(i)(C) of this Chapter.~~

268.30(b) (ii) ~~Effective November 8, 1988, the F001-F005 solvent wastes listed in Sections 3(a)(i)(A), (B), (C), or (D) of this Chapter are prohibited from land disposal. 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.~~

268.30(c) (iii) ~~Effective November 8, 1990, the F001-F005 solvent wastes which are contaminated soil and debris resulting from a response action taken under Section 104 or 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) or a corrective action required under W.S. 35-11-503(d) or RCRA Section 3008(h)] and the residues from treating these wastes are prohibited from land disposal. Between November 8, 1988, and November 8, 1990, these wastes may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 1(e)(viii)(B) of this Chapter. 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 Section 1(e)(viii)(B) of this Chapter.~~

268.30(d) (iv) The requirements of Sections 3(a)(i), and (ii), ~~and (iii)~~ of this Chapter do not apply if:

268.30(d)(1) (A) The wastes meet the applicable treatment standards of Section 4 of this Chapter; ~~or~~

268.30(d)(2) (B) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 1(f) of this Chapter, with respect to those wastes and units covered by the petition; ~~or~~

268.30(d)(3) (C) ~~Persons have been granted an extension to the effective date of a prohibition pursuant to Section 1(e) of this Chapter, with respect to those wastes and units covered by the extension.~~ The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under Section 4(e) of this Chapter; or

268.30(d)(4) (D) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 1(e) of this Chapter, with respect to those wastes covered by the extension.

268.30(e) (v) To determine whether a hazardous waste identified in this Section exceeds the applicable treatment standards specified in Section 4(a) of this Chapter, 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 Section 4(h) of this Chapter, the waste is prohibited from land disposal, and all requirements of

this Chapter are applicable, except as otherwise specified.

- 268.31 (b) WASTE SPECIFIC PROHIBITIONS -- DIOXIN-CONTAINING WASTES.
- 268.31(a) (i) Effective November 8, 1988, the dioxin-containing wastes specified in Chapter 2, Section 4(b) of these rules and regulations as EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, F027, and F028, are prohibited from land disposal unless the following condition applies:
- 268.31(a)(1) (A) The F020-F023 and F026-F028 dioxin-containing waste is contaminated soil and debris resulting from a response action taken under Section 104 or 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) or a corrective action taken under W.S. 35-11-503(d) or RCRA Section 3008(h).
- 268.31(b) (ii) Effective November 8, 1990, the F020-F023 and F026-F028 dioxin-containing wastes listed in Section 3(b)(i)(A) of this Chapter are prohibited from land disposal.
- 268.31(c) (iii) Between November 8, 1988, and November 8, 1990, wastes included in Section 3(b)(i)(A) of this Chapter may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 1(e)(viii)(B) of this Chapter and all other applicable requirements of Chapter 5; Chapter 10; and Chapter 11, Section 1 and Sections 4 through 31 of these rules and regulations.
- 268.31(d) (iv) The requirements of Section 3(b)(i) and (ii) of this Chapter do not apply if:
- 268.31(d)(1) (A) The wastes meet the standards of Section 4 of this Chapter; or
- 268.31(d)(2) (B) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 1(f) of this Chapter, with respect to those wastes and units covered by the petition; or
- 268.31(d)(3) (C) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 1(e) of this Chapter, with respect to those wastes covered by the extension.
- ~~268.32 (c) WASTE SPECIFIC PROHIBITIONS -- CALIFORNIA LIST WASTES~~
- ~~268.32(a) (i) Effective July 8, 1987, the following hazardous wastes are prohibited from land disposal (except in injection wells):~~
- ~~268.32(a)(1) (A) Liquid hazardous wastes having a pH less than or equal to two (2.0);~~
- ~~268.32(a)(2) (B) Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 ppm;~~
- ~~268.32(a)(3) (C) Liquid hazardous wastes that are primarily water and contain halogenated organic compounds (HOCs) in total concentration greater than or equal to 1,000 mg/l and less than 10,000 mg/l HOCs.~~
- ~~RCRA §3004(d)(2)(A) (D) Liquid hazardous wastes, including free liquids associated with any solid or sludge, containing free cyanides at~~

~~concentrations greater than or equal to 1,000 mg/l.~~

~~RCRA §3004(d)(2)(B) (E) Liquid hazardous wastes, including free liquids associated with any solid or sludge, containing the following metals (or elements) or compounds of these materials (or elements) at concentrations greater than or equal to those specified below:~~

~~... (i) (I) Arsenic and/or compounds (as As) 500 mg/l;~~

~~... (ii) (II) Cadmium and/or compounds (as Cd) 100 mg/l;~~

~~... (iii) (III) Chromium (VI and/or compounds (as Cr VI)) 500 mg/l;~~

~~... (iv) (IV) Lead and/or compounds (as Pb) 500 mg/l;~~

~~... (v) (V) Mercury and/or compounds (as Hg) 20 mg/l;~~

~~... (vi) (VI) Nickel and/or compounds (as Ni) 124 mg/l;~~

~~... (vii) (VII) Thallium and/or compounds (as Th) 130 mg/l.~~

~~268.32(b) (ii) Reserved.~~

~~268.32(c) (iii) Reserved.~~

~~268.32(d) (iv) The requirements of Sections 3(c)(i) and (v) of this Chapter do not apply until:~~

~~268.32(d)(1) (A) July 8, 1989 where the wastes are contaminated soil or debris not resulting from a response action taken under Section 104 or 106 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or a corrective action taken under W.S. 35-11-503(d) or RCRA Section 3008(h)]. Between July 8, 1987 and July 8, 1989, the wastes may be disposed in a landfill or surface impoundment only if such disposal is in compliance with the requirements specified in Section 1(e)(viii)(B) of this Chapter.~~

~~268.32(d)(2) (B) November 8, 1990 where the wastes are contaminated soil or debris resulting from a response action taken under Section 104 or 106 of CERCLA or a corrective action taken under W.S. 35-11-503(d) or RCRA Section 3008(h). Between November 8, 1988, and November 8, 1990, the wastes may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 1(e)(viii)(B) of this Chapter.~~

~~268.32(e) (v) Effective November 8, 1988, the following hazardous wastes are prohibited from land disposal (subject to any regulations that may be promulgated with respect to disposal in injection wells):~~

~~268.32(e)(1) (A) Liquid hazardous wastes that contain HOCs in total concentration greater than or equal to 1,000 mg/l and are not prohibited under Section 3(c)(i)(C) of this Chapter; and~~

~~268.32(e)(2) (B) Nonliquid hazardous wastes containing HOCs in total concentration greater than or equal to 1,000 mg/kg and are not wastes described in Section 3(c)(iv) of this Chapter.~~

- ~~268.32(f) (vi) Between July 8, 1987 and November 8, 1988, the wastes included in Sections 3(c)(v)(A) and (B) of this Chapter may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 1(e)(viii)(B) of this Chapter.~~
- ~~268.32(g) (vii) The requirements of Sections 3(c)(i), (iv), and (v) of this Chapter do not apply if:~~
- ~~268.32(g)(1) (A) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 1(f) of this Chapter, with respect to those wastes and units covered by the petition (except for liquid hazardous wastes containing polychlorinated biphenyls at concentrations greater than or equal to 500 ppm which are not eligible for such exemptions); or~~
- ~~268.32(g)(2) (B) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 1(e) of this Chapter, with respect to those wastes covered by the extension; or~~
- ~~268.32(g)(3) (C) The wastes meet the applicable standards specified in Section 4 of this Chapter or, where treatment standards are not specified, the wastes are in compliance with the applicable prohibitions set forth in Section 3(c) of this Chapter and W.S. 35-11-503(d).~~
- ~~268.32(h) (viii) The prohibitions and effective dates specified in Sections 3(c)(i)(C), 3(c)(iv) and 3(c)(v) of this Chapter do not apply where the waste is subject to a Section 3 of this Chapter prohibition and effective date for a specified HOC (such as a hazardous waste chlorinated solvent, see e.g., Section 3(a)(i) of this Chapter).~~
- ~~268.32(i) (ix) To determine whether or not a waste is a liquid under Sections 3(c)(i) and 3(c)(v) of this Chapter and under Section 3(c) of this Chapter and W.S. 35-11-503(d), the following test must be used: Method 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods," EPA Publication No. SW 846. (Incorporated by reference, see Chapter 1, Section 1(g)(i)(L) of these rules and regulations.)~~
- ~~268.32(j) (x) Except as otherwise provided in Section 3(c)(x) of this Chapter, the waste analysis and recordkeeping requirements of Section 1(g) of this Chapter are applicable to wastes prohibited under this Chapter or Section 3(c) of this Chapter and W.S. 35-11-503(d):~~
- ~~268.32(j)(1) (A) The initial generator of a liquid hazardous waste must test his or her waste (not an extract or filtrate) in accordance with the procedures specified in Chapter 2, Section 3(c)(i)(A) of these rules and regulations, or use knowledge of the waste, to determine if the waste has a pH less than or equal to two (2.0). If the liquid waste has a pH less than or equal to two (2.0), it is restricted from land disposal and all requirements of this Chapter are applicable, except as otherwise specified in Section 3(c) of this Chapter.~~
- ~~268.32(j)(2) (B) The initial generator of either a liquid hazardous waste containing polychlorinated biphenyls (PCBs) or a liquid or nonliquid hazardous waste containing halogenated organic compounds (HOCs) must test his or her waste (not an extract or filtrate), or use knowledge of the waste, to determine whether the~~

~~concentration levels in the waste equal or exceed the prohibition levels specified in Section 3(c) of this Chapter. If the concentration of PCBs or HOCs in the waste is greater than or equal to the prohibition levels specified in Section 3(c) of this Chapter, the waste is restricted from land disposal and all requirements of this Chapter are applicable, except as otherwise specified in Section 3(c) of this Chapter.~~

268.32 (c) WASTE SPECIFIC PROHIBITIONS--SOILS EXHIBITING THE TOXICITY CHARACTERISTIC FOR METALS AND CONTAINING PCBS.

268.32(a) (i) Effective December 26, 2000, the following wastes are prohibited from land disposal: any volumes of soil exhibiting the toxicity characteristic solely because of the presence of metals (D004--D011) and containing PCBs.

268.32(b) (ii) The requirements of Section 3(c)(i) of this Chapter do not apply if:

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

268.32(b)(1)(ii) (I) The wastes meet the treatment standards specified in Section 4 of this Chapter[Subpart D of this part] for EPA hazardous waste numbers D004--D011, as applicable; or

268.32(b)(2)(i) (B) (I) The wastes contain halogenated organic compounds in total concentration less than 1,000 mg/kg; and

268.32(b)(2)(ii) (II) The wastes meet the alternative treatment standards specified in Section 4(j) of this Chapter for contaminated soil; or

268.32(b)(3) (C) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 1(f) of this Chapter, with respect to those wastes and units covered by the petition; or

268.32(b)(4) (D) The wastes meet applicable alternative treatment standards established pursuant to a petition granted under Section 4(e) of this Chapter.

~~268.33 (d) Waste specific prohibitions First Third " \1 2~~

~~268.33(a) (i) Effective August 8, 1988, the wastes specified in Chapter 2, Section 4(c) of these rules and regulations as EPA Hazardous Waste Nos. F006 (nonwastewater), K001, K004 wastes specified in Section 4(d)(i) of this Chapter, K008 wastes specified in Section 4(d)(i) of this Chapter, K016, K018, K019, K020, K021 wastes specified in Section 4(d)(i) of this Chapter, K022 (nonwastewater), K024, K025 nonwastewaters specified in Section 4(d)(i) of this Chapter, K030, K036 (nonwastewater), K037, K044, K045, nonexplosive K046 (nonwastewater), K047, K060 (nonwastewater), K061 (nonwastewaters containing less than 15% zinc), K062, non CaSO₄ K069 (nonwastewaters), K086 (solvent washes), K087, K099, K100 nonwastewaters specified in Section 4(d)(i) of this Chapter, K101 (wastewater), K101 (nonwastewater, low arsenic subcategory -- less than 1% total arsenic), K102 (wastewater), K102 (nonwastewater, low arsenic subcategory -- less than 1% total arsenic), K103, and K104 are prohibited from land disposal (except in an injection well).~~

~~268.33(a)(1) (A) Effective August 8, 1988 and continuing until August 7, 1990, K061 wastes containing 15% zinc or greater are prohibited from land disposal pursuant to the treatment standards~~

specified in Section 4(b) of this Chapter applicable to K061 wastes that contain less than 15% zinc.

~~268.33(b) (ii) Effective August 8, 1990, the waste specified in Chapter 2, Section 4(c) of these rules and regulations as EPA Hazardous Waste Nos. K071 is prohibited from land disposal.~~

~~268.33(e) (iii) Effective August 8, 1990, the wastes specified in 40 CFR 268.10 having a treatment standard in Section 4 of this Chapter based on incineration and which are contaminated soil and debris are prohibited from land disposal.~~

~~268.33(d) (iv) Between November 8, 1988 and August 8, 1990, wastes included in Sections 3(d)(ii) and (iii) of this Chapter may be disposed of in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 1(c)(viii)(B) of this Chapter.~~

~~268.33(e) (v) The requirements of Sections 3(d)(i), (ii), (iii), and (iv) of this Chapter do not apply if:~~

~~268.33(e)(1) (A) The wastes meet the applicable standards specified in Section 4 of this Chapter; or~~

~~268.33(e)(2) (B) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 1(f) of this Chapter, with respect to those wastes and units covered by the petition; or~~

~~268.33(e)(3) (C) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 1(e) of this Chapter, with respect to those wastes covered by the extension.~~

~~268.33(f) (vi) Between August 8, 1988, and May 8, 1990, the wastes specified in 40 CFR part 268.10 for which treatment standards under Section 4 of this Chapter have not been promulgated, including those wastes which are subject to the statutory prohibitions of Section 3(c) of this Chapter and W.S. 35-11-503(d) or codified prohibitions under Section 3(c) of this Chapter, but not including wastes subject to a treatment standard under Section 4(c) of this Chapter, are prohibited from disposal in a landfill or surface impoundment unless a demonstration and certification have been submitted to Section 1(h) of this Chapter.~~

~~268.33(g) (vii) To determine whether a hazardous waste listed in 40 CFR part 268.10 exceeds the applicable treatment standards specified in Section 4(a) of this Chapter, the initial generator must test a representative sample of the waste extract or the entire waste depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Section 4 of this Chapter levels, the waste is prohibited from land disposal and all requirements of this Chapter are applicable, except as otherwise specified.~~

268.33 (d) WASTE SPECIFIC PROHIBITIONS--CHLORINATED ALIPHATIC WASTES.

268.33(a) (i) Effective May 8, 2001, the wastes specified in Chapter 2 of these rules and regulations as EPA Hazardous Wastes Numbers K174, and K175, soil and debris contaminated with these wastes, radioactive wastes mixed with these wastes, and soil and debris contaminated with radioactive wastes mixed with these wastes

are prohibited from land disposal.

268.33(b) (ii) The requirements of Section 3(d)(i) of this Chapter do not apply if:

268.33(b)(1) (A) The wastes meet the applicable treatment standards specified in Section 4 of this Chapter;

268.33(b)(2) (B) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 1(f) of this Chapter, with respect to those wastes and units covered by the petition;

268.33(b)(3) (C) The wastes meet the applicable treatment standards established pursuant to a petition granted under Section 4(e) of this Chapter;

268.33(b)(4) (D) Hazardous debris has met the treatment standards in Section 4(a) of this Chapter or the alternative treatment standards in Section 4(f) of this Chapter; or

268.33(b)(5) (E) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 1(e) of this Chapter, with respect to these wastes covered by the extension.

268.33(c) (iii) To determine whether a hazardous waste identified in this Section exceeds the applicable treatment standards specified in Section 4(a) of this Chapter, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains regulated constituents in excess of the applicable levels of Section 4 of this Chapter, the waste is prohibited from land disposal, and all requirements of this Chapter are applicable, except as otherwise specified.

268.33(d) (iv) Disposal of K175 wastes that have complied with all applicable Section 4(a) of this Chapter treatment standards must also be macroencapsulated in accordance with Section 4(f)/Table 1 of this Chapter unless the waste is placed in:

268.33(d)(1) (A) A W.S. 35-11-503(d)monofill containing only K175 wastes that meet all applicable Section 4(a) of this Chapter treatment standards; or

268.33(d)(2) (B) A dedicated W.S. 35-11-503(d) landfill cell in which all other wastes being co-disposed are at pH≤6.0.

268.34 (e) WASTE SPECIFIC PROHIBITIONS — ~~SECOND THIRD WASTES TOXICITY CHARACTERISTIC METAL WASTES.~~

268.34(a) (i) ~~Effective June 8, 1989, the following wastes specified in Chapter 2, Section 4(b) of these rules and regulations as EPA Hazardous Waste Nos. F010; F024; the wastes specified in Chapter 2, Section 4(c) of these rules and regulations as EPA Hazardous Waste Nos. K005, K007; K009 (nonwastewaters), K010; K023; K027; K028; K029 (nonwastewaters); K036 (wastewaters); K038; K039; K040; K043; K093; K094; K095 (nonwastewaters); K096 (nonwastewaters); K113; K114; K115; K116; and the wastes specified in Chapter 2, Section 4(d) of these rules and regulations as EPA Hazardous Waste Nos. P013; P021; P029; P030; P039; P040; P041; P043; P044; P062; P063; P071; P074; P085; P089; P094; P097; P098; P099; P104; P106; P109; P111; P121; U028; U058; U069; U087; U088; U102; U107; U221; U223; and U235 are prohibited from land disposal. Effective August 24, 1998, the following wastes are prohibited from land disposal: the~~

wastes specified in Chapter 2 of these rules and regulations 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 Chapter 2 of these rules and regulations.

268.34(b) ~~(ii) Effective June 8, 1989, the following wastes specified in Chapter 2, Section 4(c) of these rules and regulations as EPA Hazardous Waste Nos. K009 (wastewaters), K011 (nonwastewaters), K013 (nonwastewaters), and K014 (nonwastewaters) are prohibited from land disposal except when they are underground injected pursuant to 40 CFR 148.14(f) and 148.15(d). 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.~~

268.34(c) ~~(iii) Effective July 8, 1989, the wastes specified in Chapter 2, Section 4(b) of these rules and regulations as EPA Hazardous Waste Nos. F006 cyanide (nonwastewater); F008; F009; F011 (wastewaters) and F012 (wastewaters) are prohibited from land disposal. 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.~~

268.34(e)(1) ~~(A) Effective July 8, 1989, the following waste specified in Chapter 2, Section 4(b) of these rules and regulations as EPA Hazardous Waste No. F007 is prohibited from land disposal except when it is underground injected pursuant to 40 CFR 148.14(f).~~

268.34(e)(2) ~~(B) Effective July 8, 1989 and continuing until December 8, 1989, F011 (nowastewaters) and F012 (nonwastewaters) are prohibited from land disposal pursuant to the treatment standards specified in Section 4(a) of this Chapter applicable to F007, F008, and F009 nonwastewaters. Effective December 8, 1989 F011 (nonwastewaters) and F012 (nonwastewaters) are prohibited from land disposal pursuant to the treatment standards specified in Section 4(a) of this Chapter applicable to F011 (nonwastewaters) and F012 (nonwastewaters).~~

268.34(d) ~~(iv) Effective June 8, 1991, the wastes specified in Section 3(c) of this Chapter having a treatment standard in Section 4 of this Chapter based on incineration, and which are contaminated soil and debris are prohibited from land disposal. 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 Section 1(e)(viii) of this Chapter.~~

268.34(e) ~~(v) Between June 8, 1989 and June 8, 1991, (for wastes F007, F008, F009, F011, and F012 between June 8, 1989 and July 8,~~

~~1989) wastes included in Sections 3(c)(iii) and (iv) of this Chapter may be disposed in a landfill or surface impoundment, regardless whether such unit is a new, replacement, or lateral expansion unit, only if such unit is in compliance with the technical requirements specified in Section 1(e)(viii)(B) of this Chapter. The requirements of Section 3(e)(i) and (ii) of this Chapter do not apply if:~~

- 268.34(e)(1) ~~_____ (A) The wastes meet the applicable treatment standards specified in Section 4 of this Chapter;~~
- 268.34(e)(2) ~~_____ (B) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 1(f) of this Chapter, with respect to those wastes and units covered by the petition;~~
- 268.34(e)(3) ~~_____ (C) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under Section 4(e) of this Chapter; or~~
- 268.34(e)(4) ~~_____ (D) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 1(e) of this Chapter, with respect to these wastes covered by the extension.~~
- 268.34(f) ~~(vi) The requirements of Sections 3(c)(i), (ii), (iii), and (iv) of this Chapter do not apply if: To determine whether a hazardous waste identified in this Section exceeds the applicable treatment standards specified in Section 4(a) of this Chapter, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentration 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 Section 4(h) of this Chapter, the waste is prohibited from land disposal, and all requirements of this Chapter are applicable, except as otherwise specified.~~
- 268.34(f)(1) ~~_____ (A) The wastes meet the applicable standards specified in Section 4 of this Chapter; or~~
- 268.34(f)(2) ~~_____ (B) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 1(f) of this Chapter, with respect to those wastes and units covered by the petition.~~
- 268.34(g) ~~_____ (vii) The requirements of Sections 3(c)(i), (ii), and (iii) of this Chapter do not apply if persons have been granted an extension to the effective date of a prohibition pursuant to Section 1(e) of this Chapter, with respect to those wastes covered by the extension.~~
- 268.34(h) ~~_____ (viii) Between June 8, 1989 and May 8, 1990, the wastes specified in 40 CFR part 268.11 for which treatment standards under Section 4 of this Chapter are not applicable, including California list wastes subject to the statutory prohibitions of Section 3(c) of this Chapter and W.S. 35-11-503(d) or codified prohibitions under Section 3(c) of this Chapter, are prohibited from disposal in a landfill or surface impoundment unless the wastes are the subject of a valid demonstration and certification pursuant to Section 1(h) of this Chapter.~~
- 268.34(i) ~~_____ (ix) To determine whether a hazardous waste listed in 40~~

~~CFR parts 268.10, 268.11, or 268.12 exceeds the applicable treatment standards specified in Section 4(a) of this Chapter, the initial generator must test a representative sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Section 4 of this Chapter levels, the waste is prohibited from land disposal and all requirements of this Chapter are applicable, except as otherwise specified.~~

268.35 (f) WASTE SPECIFIC PROHIBITIONS -- ~~THIRD THIRD WASTES~~
PETROLEUM REFINING WASTES.

~~268.35(a) (i) Effective August 8, 1990, the following wastes specified in Chapter 2, Section 4(b) of these rules and regulations as EPA Hazardous Waste Numbers F002 (1,1,2 trichloroethane), F005 (benzene), F005 (2 ethoxy ethanol) F005 (2 nitropropane), F006 (wastewaters), F019, F025, and F039 (wastewaters); the wastes specified in Chapter 2, Section 4(c) of these rules and regulations as EPA Hazardous Waste Numbers K002; K003; K004 (wastewaters); K005 (wastewaters); K006; K008 (wastewaters); K011 (wastewaters); K013 (wastewaters); K014 (wastewaters); K015 (nonwastewaters); K017; K021 (wastewaters); K022 (wastewaters); K025 (wastewaters); K026; K029 (wastewaters); K031 (wastewaters); K032; K033; K034; K035; K041; K042; K046 (wastewaters, reactive nonwastewaters); K048 (wastewaters); K049 (wastewaters); K050 (wastewaters); K051 (wastewaters); K052 (wastewaters); K060 (wastewaters); K061 (wastewaters) and (high zinc subcategory > 15% zinc); K069 (wastewaters, calcium sulfate nonwastewaters); K073, K083; K084 (wastewaters); K085; K095 (wastewaters); K096 (wastewaters); K097; K098; K100 (wastewaters); K101 (wastewaters); K102 (wastewaters); K105; and K106 (wastewaters); the wastes specified in Chapter 2, Section 4(d)(v) of these rules and regulations as EPA Hazardous Waste Numbers P001; P002; P003; P004; P005; P006; P007; P008; P009; P010 (wastewaters); P011 (wastewaters); P012 (wastewaters); P014; P015; P016; P017; P018; P020; P022; P023; P024; P026; P027; P028; P031; P033; P034; P036 (wastewaters); P037; P038 (wastewaters); P042; P045; P046; P047; P048; P049; P050; P051; P054; P056; P057; P058; P059; P060; P064; P065 (wastewaters); P066; P067; P068; P069; P070; P072; P073; P075; P076; P077; P078; P081; P082; P084; P088; P092 (wastewaters); P093; P095; P096; P101; P102; P103; P105; P108; P110; P112; P113; P114; P115; P116; P118; P119; P120; P122; and P123; and the wastes specified in Chapter 2, Section 4(d)(vi) of these rules and regulation as EPA Hazardous Waste Numbers U001; U002; U003; U004; U005; U006; U007; U008; U009; U010; U011; U012; U014; U015; U016; U017; U018; U019; U020; U021; U022; U023; U024; U025; U026; U027; U029; U030; U031; U032; U033; U034; U035; U036; U037; U038; U039; U041; U042; U043; U044; U045; U046; U047; U048; U049; U050; U051; U052; U053; U055; U056; U057; U059; U060; U061; U062; U063; U064; U066; U067; U068; U070; U071; U072; U073; U074; U075; U076; U077; U078; U079; U080; U081; U082; U083; U084; U085; U086; U089; U090; U091; U092; U093; U094; U095; U096; U097; U098; U099; U101; U103; U105; U106; U108; U109; U110; U111; U112; U113; U114; U115; U116; U117; U118; U119; U120; U121; U122; U123; U124; U125; U126; U127; U128; U129; U130; U131; U132; U133; U134; U135; U136 (wastewaters); U137; U138; U140; U141; U142; U143; U144; U145; U146; U147; U148; U149; U150; U151 (wastewaters); U152; U153; U154; U155; U156; U157; U158; U159; U160; U161; U162; U163; U164; U165; U166; U167; U168; U169; U170; U171; U172; U173; U174; U176; U177; U178; U179; U180; U181; U182; U183; U184; U185; U186; U187; U188; U189; U191; U192; U193; U194; U196; U197; U200; U201; U202; U203; U204; U205; U206;~~

U207; U208; U209; U210; U211; U213; U214; U215; U216; U217; U218; U219; U220; U222; U225; U226; U227; U228; U234; U236; U237; U238; U239; U240; U243; U244; U246; U247; U248; U249; and the following wastes identified as hazardous based on a characteristic alone: D001; D002, D003, D004 (wastewaters), D005, D006; D007; D008 (except for lead materials stored before secondary smelting), D009 (wastewaters), D010, D011, D012, D013, D014, D015, D016, and D017 are prohibited from land disposal.

268.35(a) (i) Effective February 8, 1999, the wastes specified in Chapter 2 of these rules and regulations as EPA Hazardous Waste 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.

268.35(b) (ii) The requirements of Section 3(f)(i) of this Chapter do not apply if:

268.35(b)(1) (A) The wastes meet the applicable treatment standards specified in Section 4 of this Chapter;

268.35(b)(2) (B) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 1(f) of this Chapter, with respect to those wastes and units covered by the petition;

268.35(b)(3) (C) The wastes meet the applicable treatment standards established pursuant to a petition granted under Section 4(e) of this Chapter;

268.35(b)(4) (D) Hazardous debris that have met treatment standards in Section 4(a) of this Chapter or in the alternative treatment standards in Section 4(f) of this Chapter; or

268.35(b)(5) (E) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 1(e) of this Chapter, with respect to these wastes covered by the extension.

268.35(c) (iii) To determine whether a hazardous waste identified in this Section exceeds the applicable treatment standards specified in Section 4(a) of this Chapter, 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 Section 4(h) of this Chapter, the waste is prohibited from land disposal, and all requirements of this Chapter are applicable, except as otherwise specified.

~~268.35(b) (ii) Effective November 8, 1990, the following wastes specified in Chapter 2, Section 4(c) of these rules and regulations as EPA Hazardous Waste Numbers K048 (nonwastewaters), K049 (nonwastewaters), K050 (nonwastewaters), K051 (nonwastewaters), and K052 (nonwastewaters) are prohibited from land disposal.~~

~~268.35(c) (iii) Effective May 8, 1992, the following waste specified in Chapter 2, Section 4(b) of these rules and regulations as EPA Hazardous Waste Numbers F039 (nonwastewaters); the wastes specified in Chapter 2, Section 4(c) as EPA Hazardous Waste Number K031 (nonwastewaters); K084 (nonwastewaters); K101 (nonwastewaters);~~

~~K102 (nonwastewaters); K106 (nonwastewaters); the wastes specified in Chapter 2, Section 4(d)(v) of these rules and regulations as EPA Hazardous Waste Numbers P010 (nonwastewaters); P011 (nonwastewaters); P012 (nonwastewaters); P036 (nonwastewaters); P038 (nonwastewaters); P065 (nonwastewaters); P087; and P092 (nonwastewaters); the wastes specified in Chapter 2, Section 4(d) of these rules and regulations as EPA Hazardous Waste Numbers U136 (nonwastewaters); and U151 (nonwastewaters); the following wastes identified as hazardous based on a characteristic alone: D004 (nonwastewaters); and D009 (nonwastewaters); and RCRA hazardous wastes that contain naturally occurring radioactive materials are prohibited from land disposal.~~

~~268.35(d) (iv) Effective May 8, 1992, hazardous wastes listed in 40 CFR parts 268.10, 268.11 or 268.12 that are mixed radioactive/hazardous wastes are prohibited from land disposal, except as provided in Section 3(f)(v) of this Chapter.~~

~~268.35(e) (v) Subject to applicable prohibitions in Sections 3(a), 3(b), and 3(c) of this Chapter, contaminated soil and debris are prohibited from land disposal as follows:~~

~~268.35(e)(1) (A) Effective May 8, 1994, debris that is contaminated with wastes listed in 40 CFR part 268.12, and debris that is contaminated with any characteristic waste for which treatment standards are established in Section 4 of this Chapter, are prohibited from land disposal.~~

~~268.35(e)(2) (B) Effective May 8, 1994, mixed radioactive hazardous debris that is contaminated with wastes listed in 40 CFR part 268.12 and mixed radioactive hazardous debris that is contaminated with any characteristic waste for which treatment standards are established in Section 4 of this Chapter, are prohibited from land disposal.~~

~~268.35(e)(3) (C) Sections 3(f)(v)(A) and (B) of this Chapter shall not apply where the generator has failed to make a good faith effort to locate treatment capacity suitable for its waste, has not utilized such capacity as it has found to be available, or has failed to file a report as required by Section 1(e)(vii) of this Chapter by August 12, 1993 or within 90 days after the hazardous waste is generated (whichever is later) describing the generator's efforts to locate treatment capacity. Where Sections 3(f)(v)(A) and (B) of this Chapter do not apply, all wastes described in those two Sections are prohibited from land disposal effective May 8, 1993.~~

~~268.35(e)(4) (D) Effective May 8, 1993, hazardous soil contaminated with wastes specified in Section 3(f) of this Chapter having treatment standards in Section 4 of this Chapter based on incineration, mercury retorting or vitrification, and soils contaminated with hazardous wastes listed in 40 CFR parts 268.10, 268.11 and 268.12 that are mixed radioactive hazardous wastes, are prohibited from land disposal.~~

~~268.35(e)(5) (E) When used in Section 3(f)(v)(A) and (B) of this Chapter, debris is defined as follows:~~

~~... (i) (I) Debris as defined in Chapter 1, Section 1(f)(i) of these rules and regulations; or~~

~~... (ii) (II) Nonfriable inorganic solids that are incapable of passing through a 9.5 mm standard sieve that require cutting, or crushing and grinding in mechanical sizing equipment~~

prior to stabilization, limited to the following inorganic or metal materials:

- ~~... (ii)(A) (1.) Metal slags (either dross or scoria).~~
- ~~... (ii)(B) (2.) Classified slag.~~
- ~~... (ii)(C) (3.) Glass.~~
- ~~... (ii)(D) (4.) Concrete (excluding cementitious or pozzolanic stabilized hazardous wastes).~~
- ~~... (ii)(E) (5.) Masonry and refractory bricks.~~
- ~~... (ii)(F) (6.) Metal cans, containers, drums, or tanks.~~
- ~~... (ii)(G) (7.) Metal nuts, bolts, pipes, pumps, valves, appliances, or industrial equipment.~~
- ~~... (ii)(H) (8.) Scrap metal as defined in Chapter 1, Section 1(f)(i) of these rules and regulations.~~
- ~~268.35(f) (vi) Between May 8, 1990 and August 8, 1990, the wastes included in Section 3(f)(i) of this Chapter may be disposed of in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 1(e)(viii)(B) of this Chapter.~~
- ~~268.35(g) (vii) Between May 8, 1990 and November 8, 1990, wastes included in Section 3(f)(ii) of this Chapter may be disposed of in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 1(e)(viii)(B) of this Chapter.~~
- ~~268.35(h) (viii) Between May 8, 1990, and May 8, 1992, wastes included in Sections 3(f)(iii), (iv), and (v) of this Chapter may be disposed of in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in Section 1(e)(viii)(B) of this Chapter.~~
- ~~268.35(i) (ix) The requirements of Sections 3(f)(i), (ii), (iii), (iv) and (v) of this Chapter do not apply if:~~
 - ~~268.35(i)(1) (A) The wastes meet the applicable standards specified in Section 4 of this Chapter;~~
 - ~~268.35(i)(2) (B) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 1(f) of this Chapter, with respect to those wastes and units covered by the petition;~~
 - ~~268.35(i)(3) (C) The wastes meet the applicable alternate standards established pursuant to a petition granted under Section 4(e) of this Chapter;~~
 - ~~268.35(i)(4) (D) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 1(e) of this Chapter, with respect to these wastes covered by the extension.~~
- ~~268.35(j) (x) To determine whether a hazardous waste listed in 40~~

~~CFR parts 268.10, 268.11, and 268.12 exceeds the applicable treatment standards specified in Section 4(a) of this Chapter, the initial generator must test a representative sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Section 4 of this Chapter levels, the waste is prohibited from land disposal, and all requirements of this Chapter are applicable, except as otherwise specified.~~

~~268.35(k) (xi) Effective May 8, 1993, D008 lead materials stored before secondary smelting are prohibited from land disposal. On or before March 1, 1993, the owner or operator of each secondary lead smelting facility shall submit to the DEQ the following: A binding contractual commitment to construct or otherwise provide capacity for storing such D008 wastes prior to smelting which complies with all applicable storage standards; documentation that the capacity to be provided will be sufficient to manage the entire quantity of such D008 wastes; and a detailed schedule for providing such capacity. Failure by a facility to submit such documentation shall render such D008 managed by that facility prohibited from land disposal effective March 1, 1993. In addition, no later than July 27, 1992 the owner or operator of each facility must place in the facility record documentation of the manner and location in which such wastes will be managed pending completion of such capacity, demonstrating that such management capacity will be adequate and complies with all applicable requirements of the Wyoming Hazardous Waste Rules and Regulations.~~

268.36 (g) WASTE SPECIFIC PROHIBITIONS NEWLY LISTED WASTES RESERVED

~~268.36(a) (i) Effective November 9, 1992, the wastes specified in Chapter 2, Section 4(c) of these rules and regulations as EPA Hazardous Waste Numbers K107, K108, K109, K110, K111, K112, K117, K118, K123, K124, K125, K126, K131, K132, and K136; and the wastes specified in Chapter 2, Section 4(d)(vi) of these rules and regulations as EPA Hazardous Waste numbers U328, U353, and U359 are prohibited from land disposal.~~

~~268.36(b) (ii) Effective June 30, 1993, the wastes specified in Chapter 2, Section 4(b) of these rules and regulations as EPA Hazardous Waste Numbers F037 and F038 that are not generated from surface impoundment cleanouts or closures are prohibited from land disposal.~~

~~268.36(c) (iii) Effective June 30, 1994, the wastes specified in Chapter 2, Section 4(b) of these rules and regulations as EPA Hazardous Waste Numbers F037 and F038 that are generated from surface impoundment cleanouts or closures are prohibited from land disposal.~~

~~268.36(d) (iv) Effective June 30, 1994, radioactive wastes that are mixed with hazardous wastes specified in Chapter 2, Section 4(b) of these rules and regulations as EPA Hazardous Waste Numbers F037 and F038; the wastes specified in Chapter 2, Section 4(c) of these rules and regulations as EPA Hazardous Waste Numbers K107, K108, K109, K110, K111, K112, K117, K118, K123, K124, K125, K126, K131, K132, and K136; or the wastes specified in Chapter 2, Section 4(d)(vi) of these rules and regulations as EPA Hazardous Waste Numbers U328, U353, and U359 are prohibited from land disposal.~~

~~268.36(e) (v) Effective June 30, 1994, debris contaminated with hazardous wastes specified in Chapter 2, Section 4(b) of these rules~~

and regulations as EPA Hazardous Waste Numbers F037 and F038; the wastes specified in Chapter 2, Section 4(c) of these rules and regulations as EPA Hazardous Waste Numbers K107, K108, K109, K110, K111, K112, K117, K118, K123, K124, K125, K126 K131, K132, and K136; or the wastes specified in Chapter 2, Section 4(d)(vi) of these rules and regulations) as EPA Hazardous Waste Numbers U328, U353, and U359; and which is not contaminated with any other waste already subject to a prohibition are prohibited from land disposal.

~~268.36(f) (vi) Between June 30, 1992 and June 30, 1993, the wastes included in Section 3(g)(ii) of this Chapter may be disposed of in a landfill, only if such unit is in compliance with the requirements specified in Section 1(e)(viii)(B) of this Chapter, and may be generated in and disposed of in a surface impoundment only if such unit is in compliance with either Section 1(e)(viii)(B) or Section 2(e) of this Chapter.~~

~~268.36(g) (vii) Between June 30, 1992 and June 30, 1994, the wastes included in Sections 3(g)(iv) and (v) of this Chapter may be disposed of in a landfill only if such unit is in compliance with the requirements specified in Section 1(e)(viii)(B) of this Chapter, and may be generated in and disposed of in a surface impoundment only if such unit is in compliance with either Section 1(e)(viii)(B) or 40 CFR part 268.14.~~

~~268.36(h) (viii) The requirements of Sections 3(g)(i), (ii), (iii), (iv) and (v) of this Chapter do not apply if:~~

~~268.36(h)(1) (A) The wastes meet the applicable standards specified in Section 4 of this Chapter;~~

~~268.36(h)(2) (B) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 1(f) of this Chapter, with respect to those wastes and units covered by the petition;~~

~~268.36(h)(3) (C) The wastes meet the applicable alternate standards established pursuant to a petition granted under Section 4(e) of this Chapter;~~

~~268.36(h)(4) (D) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 1(e) of this Chapter, with respect to the wastes covered by the extension.~~

~~268.36(i) (ix) To determine whether a hazardous waste identified in Section 3(g) of this Chapter exceeds the applicable treatment standards specified in Section 4(a) of this Chapter, the initial generator must test a representative sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable levels in Section 4 of this Chapter, the waste is prohibited from land disposal, and all requirements of this Chapter are applicable, except as otherwise specified.~~

268.37 (h) WASTE SPECIFIC PROHIBITIONS-IGNITABLE AND CORROSIVE CHARACTERISTIC WASTES WHOSE TREATMENT STANDARDS WERE VACATED.

268.37(a) (i) Effective August 9, 1993, the wastes specified in Chapter 2, Section 3(b) of these rules and regulations as D001 (and is not in the High TOC Ignitable Liquids Subcategory), and specified

in Chapter 2, Section 3(c) of these rules and regulations 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.

268.37(b) (ii) Effective February 10, 1994, the wastes specified in Chapter 2, Section 3(b) of these rules and regulations as D001 (and is not in the High TOC Ignitable Liquids Subcategory), and specified in Chapter 2, Section 3(c) of these rules and regulations as D002, that are managed in systems defined in 40 CFR 144.6(e) and 146.6(e) as Class V injection wells, that do not engage in CWA-equivalent treatment before injection, are prohibited from land disposal.

268.38 (i) WASTE SPECIFIC PROHIBITIONS - NEWLY IDENTIFIED ORGANIC TOXICITY CHARACTERISTIC WASTES AND NEWLY LISTED COKE BY-PRODUCT AND CHLOROTOLUENE PRODUCTION WASTES.

268.38(a) (i) Effective December 19, 1994, the wastes specified in Chapter 2, Section 4(c) of these rules and regulations as EPA hazardous waste numbers K141, K142, K143, K144, K145, K147, K148, K149, K150, and K151 are prohibited from land disposal. In addition, debris contaminated with EPA hazardous waste numbers F037, F038, K107-K112, K117, K118, K123-K126, K131, K132, K136, U328, U353, U359, and soil and debris contaminated with D012-D043, K141-K145, and K147-K151 are prohibited from land disposal. The following wastes that are specified in Chapter 2, Section 3(e)/Table 1 of these rules and regulations as EPA hazardous waste numbers: D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043 that are not radioactive, or that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that are zero dischargers that do not engage in CWA-equivalent treatment before ultimate land disposal, or that are injected in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/ sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or better than these technologies.

268.38(b) (ii) 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.

- 268.38(c) (iii) Between December 19, 1994 and September 19, 1996, the wastes included in Section 3(i)(ii) of this Chapter may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in Section 1(e)(viii)(b) of this Chapter.
- 268.38(d) (iv) The requirements of Sections 3(i)(i), 3(i)(ii), and 3(i)(iii) of this Chapter do not apply if:
- 268.38(d)(1) (A) The wastes meet the applicable treatment standards specified in Section 4 of this Chapter.
- 268.38(d)(2) (B) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 1(f) of this Chapter, with respect to those wastes and units covered by the petition;
- 268.38(d)(3) (C) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under Section 4(e) of this Chapter;
- 268.38(d)(4) (D) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 1(e) of this Chapter with respect to these wastes covered by the extension.
- 268.38(e) (v) To determine whether a hazardous waste identified in Section 3(i) of this Chapter exceeds the applicable treatment standards specified in Section 4(a) of this Chapter, 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 Section 4 of this Chapter levels, the waste is prohibited from land disposal, and all requirements of this Chapter are applicable, except as otherwise specified.
- 268.39 (j) WASTE SPECIFIC PROHIBITIONS--SPENT ALUMINUM POTLINERS; REACTIVE; AND CARBAMATE WASTES.
- 268.39(a) (i) On July 8, 1996, the wastes specified in Chapter 2, Section 4(c) of these rules and regulations as EPA Hazardous Waste numbers K156 K159, and K161; and in Chapter 2, Section 4(d) as EPA Hazardous Waste numbers P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U278-U280, U364, U367, U372, U373, ~~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.
- 268.39(b) (ii) On July 8, 1996 the wastes identified in Chapter 2, Section 3(d) of these rules and regulations [~~40 CFR 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 Section 4(a) of

this Chapter)).

- 268.39(c) (iii) On ~~October 8, 1997~~ September 21, 1998, the wastes specified in Chapter 2, Section 4(c) of these rules and regulations 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.
- 268.39(d) (iv) 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.
- 268.39(e) (v) Between July 8, 1996 and April 8, 1998, the wastes included in Section 3(j)(i), (iii), and (iv) of this Chapter may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in Section 1(e)(viii)(B) of this Chapter.
- 268.39(f) (vi) The requirements of Section 3(j)(i), (ii), (iii) and (iv) of this Chapter do not apply if:
- 268.39(f)(1) (A) The wastes meet the applicable treatment standards specified in Section 4 of this Chapter;
- 268.39(f)(2) (B) Persons have been granted an exemption from a prohibition pursuant to a petition under Section 1(f) of this Chapter, with respect to those wastes and units covered by the petition;
- 268.39(f)(3) (C) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under Section 4(e) of this Chapter;
- 268.39(f)(4) (D) Persons have been granted an extension to the effective date of a prohibition pursuant to Section 1(e) of this Chapter, with respect to these wastes covered by the extension.
- 268.39(g) (vii) To determine whether a hazardous waste identified in Section 3(~~±j~~) of this Chapter exceeds the applicable treatment standards specified in Section 4(a) of this Chapter, 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 Section 4 of this Chapter levels, the waste is prohibited from land disposal, and all requirements ~~of Section 3 of Chapter 13~~ of Chapter 13 of these rules and regulations are applicable, except as otherwise specified.

268/Subpart D Section 4. TREATMENT STANDARDS.

268.40 (a) APPLICABILITY OF TREATMENT STANDARDS.

- 268.40(a) (i) 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:

- 268.40(a)(1) (A) 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
- 268.40(a)(2) (B) 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
- 268.40(a)(3) (C) The waste must be treated using the technology specified in the table ("Technology Standard"), which are described in detail in Section 4(c) of this Chapter/Table 1 - "Technology Codes and Description of Technology-Based Standards.
- 268.40(b) (ii) 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 Chapter 1, Section 1(g)(i)(L) of these rules and regulations, 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 Director under the procedures set forth in Section 4(c)(ii) of this Chapter.
- 268.40(c) (iii) 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.
- 268.40(d) (iv) Notwithstanding the prohibitions specified in Section 4(a)(i) of this Chapter, treatment and disposal facilities may demonstrate (and certify pursuant to Section 1(g)(ii)(E) of this Chapter) compliance with the treatment standards for organic constituents specified by a footnote in the table "treatment standards for hazardous wastes" in Section 4(a) of this Chapter, provided the following conditions are satisfied:
- 268.40(d)(1) (A) The treatment standards for the organic constituents were established based on incineration in units operated in accordance with the technical requirements of Chapter 10, Section 14 of these rules and regulations, or based on combustion in fuel substitution units operating in accordance with applicable technical requirements;
- 268.40(d)(2) (B) The treatment or disposal facility has used the methods referenced in Section 4(a)(iv)(A) of this Chapter to treat the organic constituents; and
- 268.40(d)(3) (C) 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 Section 4(a) of this Chapter by an order of magnitude.
- 268.40(e) (v) For characteristic wastes (~~D001-D003, and D012-~~

~~D043)~~ (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 Chapter 1, Section 1(f)(i) of these rules and regulations) must meet universal treatment standards, found in Section 4(h)(i) of this Chapter ~~"Table UTS"~~ "Table Universal Treatment Standards", prior to land disposal as defined in Chapter 1 Section 1(f)(i) of these rules and regulations.

~~268.40(e)(1) (A) When these wastes are managed in wastewater treatment systems regulated by the Clean Water Act (CWA), compliance with the treatment standards must be achieved no later than "end of pipe" as defined in Chapter 1 Section 1(f)(i) of these rules and regulations; or~~

~~268.40(e)(2) (B) When these wastes are managed in CWA equivalent treatment systems and tank based systems that discharge onto the land, compliance with the treatment standards must be achieved no later than the point the wastewater is released to the land (e.g., spray irrigation, discharge to dry river beds, placed into evaporation ponds); or~~

~~268.40(e)(3) (C) When these wastes are managed in Class I nonhazardous injection wells, compliance with the treatment standards must be achieved no later than the well head; or~~

~~268.40(e)(4) (D) For all other, compliance with the treatment standard must be met prior to land disposal as defined in Chapter 1 Section 1(f)(i) of these rules and regulations.~~

268.40(f) (vi) 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 Chapter 1, Section 1(g)(i)(L) of these rules and regulations. 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.

[Note: The treatment standards that heretofore appeared in tables in Sections 4(b), 4(c), and 4(d) of this Chapter have been consolidated into the table "Treatment Standards for Hazardous Wastes" in Section 4(a).]

268.40(g) (vii) ~~Between August 26, 1997 and August 26, 1998~~ August 26, 1996 and March 4, 1999, the treatment standards for the wastes specified in Chapter 2, Section 4(c) of these rules and regulations as EPA Hazardous Waste numbers K156-K161; and in Chapter 2, Section 4(d) of these rules and regulations 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 Section 4(c)

of this Chapter 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 Section 4(c) of this Chapter Table 1, for wastewaters.

268.40(h) (viii) 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 Section 4(a) of this Chapter prior to land disposal.

268.40(i) (ix) 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 Section 4(b) of this Chapter contained in the 40 CFR, parts 260 to 299, edition revised as of July 1, 1990.

268.40(j) (x) Effective September 4, 1998, the treatment standards for the wastes specified in Chapter 2, Section 4(d) of these rules and regulations 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 Section 4(c) of this Chapter 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 Section 4(c) of this Chapter Table 1, for wastewaters.

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 Chapter 2, Section 3(b)(i)(A) High TOC Subcategory. | NA | NA | DEACT and meet Chapter 13, Section 4(h) standards ⁸ ; or RORGS; or CMBST | DEACT and meet Chapter 13, Section 4(h) standards ⁸ ; or RORGS; or CMBST |
| | High TOC Ignitable Characteristic Liquids Subcategory based on Chapter 2, Section 3(b)(i)(A) - Greater than or equal to 10% total organic carbon. (Note: This subcategory consists of nonwastewaters only.) | NA | NA | NA | RORGS; or CMBST; or <u>POLYM</u> |
| D002 ⁹ | Corrosive Characteristic Wastes. | NA | NA | DEACT and meet Chapter 13, Section 4(h) standards ⁸ | DEACT and meet Chapter 13, Section 4(h) 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

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|----------------------------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| | | Selenium | 7782-49-2 | NA | HLVIT |
| | | Silver | 7440-22-4 | NA | HLVIT |
| D003 ⁹ | Reactive Sulfides Subcategory based on Chapter 2, Section 3(d)(i)(E). | NA | NA | DEACT | DEACT |
| | Explosives Subcategory based on Chapter 2, Section 3(d)(i)(F), (G), and (H). | NA | NA | DEACT and meet Chapter 13, Section 4(h) standards ⁸ | DEACT and meet Chapter 13, Section 4(h) 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 Chapter 2, Section 3(d)(i)(A). | NA | NA | DEACT and meet Chapter 13, Section 4(h) standards ⁸ | DEACT and meet Chapter 13, Section 4(h) standards ⁸ |
| | Water Reactive Subcategory based on Chapter 2, Section 3(d)(i)(B), (C) and (D). (Note: This subcategory consists of nonwastewaters only.) | NA | NA | NA | DEACT and meet Chapter 13, Section 4(h) standards ⁸ |
| | Reactive Cyanides Subcategory based on Chapter 2, Section 3(d)(i)(E). | Cyanides (Total) ⁷ | 57-12-5 | Reserved | 590 |
| Cyanides (Amenable) ⁷ | | 57-12-5 | 0.86 | 30 | |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

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|-------------------|---|--|-------------------------|--|--|
| | | 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 |
| D004 ² | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for arsenic based on the extraction <u>toxicity characteristic leaching</u> procedure (EP) (TCLP) in SW846. | Arsenic Arsenic; alternate⁶ standard for nonwastewaters only. | 7440-38-2 | 5.0 <u>1.4</u> and meet Chapter 13, Section 4(h) standards ⁸ NA | 5.0 mg/l EP TCLP and meet Chapter 13, Section 4(h) standards ⁸ |
| D005 ² | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for barium based on the extraction <u>toxicity characteristic leaching</u> procedure (EP) (TCLP) in SW846. | Barium | 7440-39-3 | 100 <u>1.2</u> and meet Chapter 13, Section 4(h) standards ⁸ | 100 <u>21</u> mg/l TCLP and meet Chapter 13, Section 4(h) standards ⁸ |
| D006 ² | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for cadmium based on the extraction <u>toxicity characteristic leaching</u> procedure (EP) (TCLP) in SW846. | Cadmium | 7440-43-9 | 1.0 <u>0.69</u> and meet Chapter 13, Section 4(h) standards ⁸ | 1.0 <u>0.11</u> mg/l TCLP and meet Chapter 13, Section 4(h) standards ⁸ |
| | Cadmium Containing Batteries Subcategory. (Note: This subcategory consists of nonwastewaters only.) | Cadmium | 7440-43-9 | NA | RTHRM |
| D007 ² | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for chromium based on the extraction <u>toxicity characteristic leaching</u> procedure (EP) (TCLP) in SW846 Method 1310. | Chromium (Total) | 7440-47-3 | 5.0 <u>2.77</u> and meet Chapter 13, Section 4(h) standards ⁸ | 5.0 <u>0.60</u> mg/l TCLP and meet Chapter 13, Section 4(h) standards ⁸ |

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|-------------------|--|---|-------------------------|---|--|
| | | 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 |
| D008 ² | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for lead based on the extraction <u>toxicity characteristic leaching</u> procedure (EP) (TCLP) in SW846. | Lead | 7439-92-1 | 5.0 <u>0.69</u> and meet Chapter 13, Section 4(h) standards ⁸ | 5.0 <u>0.75</u> mg/l (EP) <u>TCLP</u> and meet Chapter 13, Section 4(h) standards ⁸ |
| | | Lead; alternate⁶ standard for nonwastewaters only | 7439-92-1 | NA | 5.0 mg/l TCLP |
| | Lead Acid Batteries Subcategory (Note: This standard only applies to lead acid batteries that are identified as [RCRA] <u>^</u> hazardous wastes and that are not excluded elsewhere from regulation under the land disposal restrictions of Chapter 13 or exempted under other WDEQ <u>EPA</u> regulations (see Chapter 12, Section 7(a)). This subcategory consists of nonwastewaters only.) | Lead | 7439-92-1 | NA | RLEAD |

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|-------------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| | Radioactive Lead Solids Subcategory (Note: these lead solids include, but are not limited to, all forms of lead shielding and other elemental forms of lead. These lead solids do not include treatment residuals such as hydroxide sludges, other wastewater treatment residuals, or incinerator ashes that can undergo conventional pozzolanic stabilization, nor do they include organo-lead materials that can be incinerated and stabilized as ash. This subcategory consists of nonwastewaters only.) | Lead | 7439-92-1 | NA | MACRO |
| D009 ² | Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the extraction <u>toxicity characteristic leaching procedure (EPL) (TCLP)</u> in SW846 Method 1310; and contain greater than or equal to 260 mg/kg total mercury that also contain organics and are not incinerator residues. (High Mercury-Organic Subcategory) | Mercury | 7439-97-6 | NA | IMERC; OR RMERC |

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|------------|--|---------------------------------|-------------------------|--|--|
| | | 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 |
| | Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the <u>extraction toxicity characteristic leaching procedure (EP) (TCLP) in SW846 Method 1310</u> ; 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 <u>extraction toxicity characteristic leaching procedure (EP) (TCLP) in SW846 Method 1310</u> ; and contain less than 260 mg/kg total mercury <u>and that are residues from RMERC only</u> . (Low Mercury Subcategory) | Mercury | 7439-97-6 | NA | 0.20 mg/l TCLP <u>and meet Chapter 13, Section 4(h) standards</u> ⁸ |
| | <u>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</u> . (Low Mercury Subcategory) | Mercury | 7439-97-6 | NA | 0.025 mg/l TCLP <u>and meet Chapter 13, Section 4(h) standards</u> ⁸ |

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|-------------------|---|---------------------------------|-------------------------|--|--|
| | | 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 | 0.20 <u>0.15</u> and meet Chapter 13, Section 4(h) 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 ² | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for selenium based on the extraction <u>toxicity characteristic leaching procedure (EP)</u> (TCLP) in SW846 Method 1310. | Selenium | 7782-49-2 | 4.0 <u>0.82</u> and meet Chapter 13, Section 4(h) standards ⁸ | 5.7 mg/l TCLP and meet Chapter 13, Section 4(h) standards ⁸ |
| D011 ² | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for silver based on the extraction <u>toxicity characteristic leaching procedure</u> (TCLP) in SW846 Method 1310. | Silver | 7440-22-4 | 5.0 <u>0.43</u> and meet Chapter 13, Section 4(h) standards ⁸ | 5.0 <u>0.14</u> mg/l TCLP and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ |

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|-------------------|---|--|-------------------------|--|--|
| | | 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 |
| | | Endrin aldehyde | 7421-93-4 | BIODG; or CMBST | 0.13 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ |
| | | beta-BHC | 319-85-7 | CARBN; or CMBST | 0.066 and meet Chapter 13, Section 4(h) standards ⁸ |
| | | delta-BHC | 319-86-8 | CARBN; or CMBST | 0.066 and meet Chapter 13, Section 4(h) standards ⁸ |
| | | gamma-BHC (Lindane) | 58-89-9 | CARBN; or CMBST | 0.066 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ |

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|-------------------|---|-------------------------------------|-------------------------|--|--|
| | | 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 |
| D018 ⁹ | Wastes that are TC for Benzene based on the TCLP in SW846 Method 1311. | Benzene | 71-43-2 | 0.14 and meet Chapter 13, Section 4(h) standards ⁸ | 10 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 6.0 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 0.26 and meet Chapter 13, Section 4(h) standards ⁸ |
| D021 ⁹ | Wastes that are TC for Chlorobenzene based on the TCLP in SW846 Method 1311. | Chlorobenzene | 108-90-7 | 0.057 and meet Chapter 13, Section 4(h) standards ⁸ | 6.0 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 6.0 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 5.6 and meet Chapter 13, Section 4(h) standards ⁸ |

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|-------------------|---|--|-------------------------|--|--|
| | | 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 |
| 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 Chapter 13, Section 4(h) standards ⁸ | 5.6 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 5.6 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 11.2 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 6.0 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 6.0 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 6.0 and meet Chapter 13, Section 4(h) standards ⁸ |

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| | | 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 Chapter 13, Section 4(h) standards ⁸ | 140 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 0.066 and meet Chapter 13, Section 4(h) standards ⁸ |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 and meet Chapter 13, Section 4(h) standards ⁸ | 0.066 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 10 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 5.6 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 30 and meet Chapter 13, Section 4(h) standards ⁸ |

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|-------------------|--|---------------------------------|-------------------------|--|--|
| | | 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 |
| 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 Chapter 13, Section 4(h) standards ⁸ | 36 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 14 and meet Chapter 13, Section 4(h) standards ⁸ |
| D037 ⁹ | Wastes that are TC for Pentachlorophenol based on the TCLP in SW846 Method 1311. | Pentachlorophenol | 87-86-5 | 0.089 and meet Chapter 13, Section 4(h) standards ⁸ | 7.4 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 16 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 6.0 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 6.0 and meet Chapter 13, Section 4(h) standards ⁸ |

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|-------------------|--|---------------------------------|-------------------------|--|--|
| | | 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 |
| 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 Chapter 13, Section 4(h) standards ⁸ | 7.4 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 7.4 and meet Chapter 13, Section 4(h) 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 Chapter 13, Section 4(h) standards ⁸ | 6.0 and meet Chapter 13, Section 4(h) standards ⁸ |
| F001, | F001, F002, F003, F004 and/or F005 | Acetone | 67-64-1 | 0.28 | 160 |

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|------------|---|--|-------------------------|--|--|
| | | 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 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |
| | | Carbon disulfide | 75-15-0 | 3.8 | NA |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| | | Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations) | 1319-77-3 | 0.88 | 11.2 |
| | | Cyclohexanone | 108-94-1 | 0.36 | NA |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | Ethyl acetate | 141-78-6 | 0.34 | 33 |
| | | Ethyl benzene | 100-41-4 | 0.057 | 10 |
| | | Ethyl ether | 60-29-7 | 0.12 | 160 |
| | | Isobutyl alcohol | 78-83-1 | 5.6 | 170 |

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|------------|---|--|-------------------------|--|--|
| | | 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 |
| | | 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 |
| | F003 and/or F005 solvent wastes that | Carbon disulfide | 75-15-0 | 3.8 | 4.8 mg/l TCLP |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| | | 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 |
| | 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 |
| Chromium (Total) | 7440-47-3 | | 2.77 | 0.86 <u>0.60</u> 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 | 0.39 <u>0.75</u> mg/l TCLP | |
| Nickel | 7440-02-0 | | 3.98 | 5.0 <u>11</u> mg/l TCLP | |
| Silver | 7440-22-4 | | NA | 0.30 <u>0.14</u> mg/l TCLP | |
| F007 | Spent cyanide plating bath solutions from electroplating operations. | Cadmium | 7440-43-9 | NA | 0.19 <u>0.11</u> mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.39 <u>0.75</u> mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 <u>11</u> mg/l TCLP |
| | | Silver | 7440-22-4 | NA | 0.30 <u>0.14</u> mg/l TCLP |
| | | F008 | Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process. | Cadmium | 7440-43-9 |
| Chromium (Total) | 7440-47-3 | 2.77 | | 0.86 <u>0.60</u> 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 | | 0.39 <u>0.75</u> mg/l TCLP | |
| Nickel | 7440-02-0 | 3.98 | | 5.0 <u>11</u> 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 | 0.30 <u>0.14</u> mg/l TCLP |
| Cadmium | | 7440-43-9 | NA | 0.19 <u>0.11</u> mg/l TCLP | |
| Chromium (Total) | | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP | |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.39 <u>0.75</u> mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 <u>11</u> mg/l TCLP |
| | | Silver | 7440-22-4 | NA | 0.30 <u>0.14</u> mg/l TCLP |
| F010 | Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process. | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | NA |
| F011 | Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations. | Cadmium | 7440-43-9 | NA | 0.19 <u>0.11</u> mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.37 <u>0.75</u> mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 <u>11</u> mg/l TCLP |
| | | Silver | 7440-22-4 | NA | 0.30 <u>0.14</u> mg/l TCLP |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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. | Cadmium | 7440-43-9 | NA | 0.19 <u>0.11</u> mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.37 <u>0.75</u> mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 <u>11</u> mg/l TCLP |
| | | Silver | 7440-22-4 | NA | 0.30 <u>0.14</u> mg/l TCLP |
| F019 | Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process. | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| F020, F021, F022, F023, F026 | Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate, or component in | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| | | 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 |
| F024 | Process wastes, including but not limited to, distillation residues, heavy ends, tars, and reactor clean-out wastes, | All F024 wastes | NA | CMBST ¹¹ | CMBST ¹¹ |
| | | 2-Chloro-1,3-butadiene | 126-99-8 | 0.057 | 0.28 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| | | 3-Chloropropylene | 107-05-1 | 0.036 | 30 |
| | | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |
| | | cis-1,3-Dichloropropylene | 10061-01-5 | 0.036 | 18 |
| | | trans-1,3-Dichloropropylene | 10061-02-6 | 0.036 | 18 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 0.60 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 11 mg/l TCLP |
| F025 | Condensed light ends from the production of certain chlorinated aliphatic hydrocarbons by free-radical | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 | | |
| | | 1,2-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 | | |
| | | Chloroform | 67-66-3 | 0.046 | 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 | Hexachlorobenzene | 118-74-1 | 0.055 | 10 | | |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 | | |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 | | |
| | | Methylene chloride | 75-9-2 | 0.089 | 30 | | |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 | | |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 | | |
| | | Vinyl chloride | 75-01-4 | 0.27 | 6.0 | | |
| | | F027 | Discarded unused formulations containing tri-, tetra-, or | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| | | 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 |
| 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| <u>F032</u> | <u>Wastewaters (except those that have</u> | <u>Acenaphthene</u> | <u>83-32-9</u> | <u>0.059</u> | <u>3.4</u> |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| | | <u>Anthracene</u> | <u>120-12-7</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Benz(a)anthracene</u> | <u>56-55-3</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)</u> | <u>205-99-2</u> | <u>0.11</u> | <u>6.8</u> |
| | | <u>Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)</u> | <u>207-08-9</u> | <u>0.11</u> | <u>6.8</u> |
| | | <u>Benzo(a)pyrene</u> | <u>50-32-8</u> | <u>0.061</u> | <u>3.4</u> |
| | | <u>Chrysene</u> | <u>218-01-9</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Dibenz(a,h)anthracene</u> | <u>53-70-3</u> | <u>0.055</u> | <u>8.2</u> |
| | | <u>2-4-Dimethyl phenol</u> | <u>105-67-9</u> | <u>0.036</u> | <u>14</u> |
| | | <u>Fluorene</u> | <u>86-73-7</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Hexachlorodibenzo-p-dioxins</u> | <u>NA</u> | <u>0.000063, or CMBST¹¹</u> | <u>0.001, or CMBST¹¹</u> |
| | | <u>Hexachlorodibenzofurans</u> | <u>NA</u> | <u>0.000063, or CMBST¹¹</u> | <u>0.001, or CMBST¹¹</u> |
| | | <u>Indeno (1,2,3-c,d) pyrene</u> | <u>193-39-5</u> | <u>0.0055</u> | <u>3.4</u> |
| | | <u>Naphthalene</u> | <u>91-20-3</u> | <u>0.059</u> | <u>5.6</u> |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| | | <u>Pentachlorodibenzo-p-dioxins</u> | <u>NA</u> | <u>0.000063, or CMBST¹¹</u> | <u>0.001, or CMBST¹¹</u> |
| | | <u>Pentachlorodibenzofurans</u> | <u>NA</u> | <u>0.000035, or CMBST¹¹</u> | <u>0.001, or CMBST¹¹</u> |
| | | <u>Pentachlorophenol</u> | <u>87-86-5</u> | <u>0.089</u> | <u>7.4</u> |
| | | <u>Phenanthrene</u> | <u>85-01-8</u> | <u>0.059</u> | <u>5.6</u> |
| | | <u>Phenol</u> | <u>108-95-2</u> | <u>0.039</u> | <u>6.2</u> |
| | | <u>Pyrene</u> | <u>129-00-0</u> | <u>0.067</u> | <u>8.2</u> |
| | | <u>Tetrachlorodibenzo-p-dioxins</u> | <u>NA</u> | <u>0.000063, or CMBST¹¹</u> | <u>0.001, or CMBST¹¹</u> |
| | | <u>Tetrachlorodibenzofurans</u> | <u>NA</u> | <u>0.000063, or CMBST¹¹</u> | <u>0.001, or CMBST¹¹</u> |
| | | <u>2,3,4,6-Tetrachlorophenol</u> | <u>58-90-2</u> | <u>0.030</u> | <u>7.4</u> |
| | | <u>2,4,6-Trichlorophenol</u> | <u>88-06-2</u> | <u>0.035</u> | <u>7.4</u> |
| | | <u>Arsenic</u> | <u>7440-38-2</u> | <u>1.4</u> | <u>5.0 mg/l TCLP</u> |
| | | <u>Chromium (Total)</u> | <u>7440-47-3</u> | <u>2.77</u> | <u>0.60 mg/l TCLP</u> |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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. | <u>Acenaphthene</u> | <u>83-32-9</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Anthracene</u> | <u>120-12-7</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Benz(a)anthracene</u> | <u>56-55-3</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)</u> | <u>205-99-2</u> | <u>0.11</u> | <u>6.8</u> |
| | | <u>Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)</u> | <u>207-08-9</u> | <u>0.11</u> | <u>6.8</u> |
| | | <u>Benzo(a)pyrene</u> | <u>50-32-8</u> | <u>0.061</u> | <u>3.4</u> |
| | | <u>Chrysene</u> | <u>218-01-9</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Dibenz(a,h)anthracene</u> | <u>53-70-3</u> | <u>0.055</u> | <u>8.2</u> |
| | | <u>Fluorene</u> | <u>86-73-7</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Indeno (1,2,3-c,d) pyrene</u> | <u>193-39-5</u> | <u>0.0055</u> | <u>3.4</u> |
| | | <u>Naphthalene</u> | <u>91-20-3</u> | <u>0.059</u> | <u>5.6</u> |
| | | <u>Phenanthrene</u> | <u>85-01-8</u> | <u>0.059</u> | <u>5.6</u> |
| | | <u>Pyrene</u> | <u>129-00-0</u> | <u>0.067</u> | <u>8.2</u> |
| | | <u>Arsenic</u> | <u>7440-38-2</u> | <u>1.4</u> | <u>5.0 mg/l TCLP</u> |
| <u>Chromium (Total)</u> | <u>7440-47-3</u> | <u>2.77</u> | <u>0.60 mg/l TCLP</u> | | |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 | <p><u>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.</u></p> | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/l TCLP |
| F037 | Petroleum refinery primary oil/water/solids | Acenaphthene | 83-32-9 | 0.059 | NA |

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|------------|---|--|-------------------------|--|--|
| | | 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 |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 5.0 <u>11</u> mg/l TCLP |
| F038 | Petroleum refinery secondary (emulsified) oil/water/solids separation | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |

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|------------|---|--|-------------------------|--|--|
| | | 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 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 0.60 mg/l TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | NA |

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|------------|--|---------------------------------|-------------------------|--|--|
| | | 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 | NA | 5.0 <u>11</u> mg/l TCLP |
| F039 | Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under Chapter 13, Section 4. (Leachate resulting from the disposal of one or more of the following EPA Hazardous Wastes and no other Hazardous Wastes retains its EPA Hazardous Waste Number(s): F020, F021, F022, F026, F027, and/ or F028.) | Acenaphthylene | 208-96-8 | 0.059 | 3.4 |
| | | Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| | | Acetone | 67-64-1 | 0.28 | 160 |
| | | Acetonitrile | 75-05-8 | 5.6 | NA |
| | | Acetophenone | 96-86-2 | 0.010 | 9.7 |
| | | 2-Acetylaminofluorene | 53-96-3 | 0.059 | 140 |
| | | Acrolein | 107-02-8 | 0.29 | NA |
| | | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| | | Aldrin | 309-00-2 | 0.021 | 0.066 |
| | | 4-Aminobiphenyl | 92-67-1 | 0.13 | NA |
| | | Aniline | 62-53-3 | 0.81 | 14 |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Aramite | 140-57-8 | 0.36 | NA |
| alpha-BHC | 319-84-6 | 0.00014 | 0.066 | | |

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|------------|---|---|-------------------------|--|--|
| | | 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 |
| | | 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 |
| | | Benzo(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 |

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|------------|---|-------------------------------------|-------------------------|--|--|
| | | 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 |
| | | Carbon disulfide | 75-15-0 | 3.8 | NA |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| | | p-Chloroaniline | 106-47-8 | 0.46 | 16 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chlorobenzilate | 510-15-6 | 0.10 | NA |
| | | 2-Chloro-1,3-butadiene | 126-99-8 | 0.057 | NA |
| | | Chlorodibromomethane | 124-48-1 | 0.057 | 15 |
| | | Chloroethane | 75-00-3 | 0.27 | 6.0 |
| | | bis(2-Chloroethoxy)methane | 111-91-1 | 0.036 | 7.2 |
| | | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | bis(2-Chloroisopropyl)ether | 39638-32-9 | 0.055 | 7.2 |
| | | p-Chloro-m-cresol | 59-50-7 | 0.018 | 14 |
| | | Chloromethane (Methyl chloride) | 74-87-3 | 0.19 | 30 |

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|------------|---|--|-------------------------|--|--|
| | | 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-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 |
| | | Cyclohexanone | 108-94-1 | 0.36 | NA |
| | | 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.11 | 15 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| | | Dibromomethane | 74-95-3 | 0.11 | 15 |
| | | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 94-75-7 | 0.72 | 10 |
| | | o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| | | p,p'-DDD | 72-54-8 | 0.023 | 0.087 |
| | | o,p'-DDE | 3424-82-6 | 0.031 | 0.087 |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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,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 |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| | | 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 |
| | | 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 |

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| | | 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 |
| | | 1,4-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 |

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|------------|---|--|-------------------------|--|--|
| | | 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 | 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 |
| | | <u>1,2,3,4,6,7,8-Heptachlorodibenzo- p-dioxin (1,2,3,4,6,7,8- HpCDD)</u> | <u>35822-46-9</u> | <u>0.000035</u> | <u>0.0025</u> |
| | | <u>1, 2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8- HpCDF)</u> | <u>67562-39-4</u> | <u>0.000035</u> | <u>0.0025</u> |
| | | <u>1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9- HpCDF)</u> | <u>55673-89-7</u> | <u>0.000035</u> | <u>0.0025</u> |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |

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| | | 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 |
| | | 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 |

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| | | 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 |
| | | 3-Methylcholanthrene | 56-49-5 | 0.0055 | 15 |
| | | 4,4-Methylene bis(2-chloroaniline) | 101-14-4 | 0.50 | 30 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| | | Methyl methacrylate | 80-62-6 | 0.14 | 160 |
| | | Methyl methansulfonate | 66-27-3 | 0.018 | NA |
| | | Methyl parathion | 298-00-0 | 0.014 | 4.6 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | 2-Naphthylamine | 91-59-8 | 0.52 | NA |
| | | p-Nitroaniline | 100-01-6 | 0.028 | 28 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | 5-Nitro-o-toluidine | 99-55-8 | 0.32 | 28 |
| | | p-Nitrophenol | 100-02-7 | 0.12 | 29 |
| | | N-Nitrosodiethylamine | 55-18-5 | 0.40 | 28 |
| | | N-Nitrosodimethylamine | 62-75-9 | 0.40 | NA |
| | | N-Nitroso-di-n-butylamine | 924-16-3 | 0.40 | 17 |

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|------------|---|--|-------------------------|--|--|
| | | 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 |
| | | 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 |
| | | <u>1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)</u> | <u>3268-87-9</u> | <u>0.000063</u> | <u>0.005</u> |
| | | <u>1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)</u> | <u>39001-02-0</u> | <u>0.000063</u> | <u>0.005</u> |
| | | 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| | | 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 |
| | | 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

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|------------|---|---------------------------------------|-------------------------|--|--|
| | | 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 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| | | Bromoform (Tribromomethane) | 75-25-2 | 0.63 | 15 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| | | Trichloromonofluoromethane | 75-69-4 | 0.020 | 30 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 1,2,3-Trichloropropane | 96-18-4 | 0.85 | 30 |
| | | 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.057 | 30 |
| | | tris(2,3-Dibromopropyl) phosphate | 126-72-7 | 0.11 | NA |
| | | Vinyl chloride | 75-01-4 | 0.27 | 6.0 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

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|------------|---|--|-------------------------|--|--|
| | | 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 |
| | | Antimony | 7440-36-0 | 1.9 | 2.1 <u>1.15</u> mg/l TCLP |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| | | Barium | 7440-39-3 | 1.2 | 7.6 <u>21</u> mg/l TCLP |
| | | Beryllium | 7440-41-7 | 0.82 | NA |
| | | Cadmium | 7440-43-9 | 0.69 | 0.19 <u>0.11</u> mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | NA |
| | | Fluoride | 16964-48-8 | 35 | NA |
| | | Lead | 7439-92-1 | 0.69 | 0.37 <u>0.75</u> mg/l TCLP |
| | | Mercury | 7439-97-6 | 0.15 | 0.025 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 <u>11</u> mg/l TCLP |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

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|------------|---|--|-------------------------|--|--|
| | | 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 |
| | | Selenium | 7782-49-2 | 0.82 | 0.16 <u>5.7</u> mg/l TCLP |
| | | Silver | 7440-22-4 | 0.43 | 0.30 <u>0.14</u> mg/l TCLP |
| | | Sulfide | 8496-25-8 | 14 | NA |
| | | Thallium | 7440-28-0 | 1.4 | NA |
| | | Vanadium | 7440-62-2 | 4.3 | NA |
| K001 | Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol. | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.37 <u>0.75</u> mg/l TCLP |
| K002 | Wastewater treatment sludge from the production of chrome yellow and | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| K003 | Wastewater treatment sludge from the production of molybdate orange pigments. | Lead | 7439-92-1 | 0.69 | 0.37 0.75 mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 0.60 mg/l TCLP |
| K004 | Wastewater treatment sludge from the production of zinc yellow pigments. | Lead | 7439-92-1 | 0.69 | 0.37 0.75 mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 0.60 mg/l TCLP |
| K005 | Wastewater treatment sludge from the production of chrome green pigments. | Lead | 7439-92-1 | 0.69 | 0.37 0.75 TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| K006 | Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous). | Lead | 7439-92-1 | 0.69 | 0.37 0.75 mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 0.60 mg/l TCLP |
| | Wastewater treatment sludge from the production of chrome oxide green pigments (hydrated). | Lead | 7439-92-1 | 0.69 | NA |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 0.60 mg/l TCLP |

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|------------|--|---------------------------------|-------------------------|--|--|
| | | 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 |
| K007 | Wastewater treatment sludge from the production of iron blue pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 <u>0.75</u> mg/l TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| K008 | Oven residue from the production of chrome oxide green pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 <u>0.75</u> 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 | Acetonitrile | 75-05-8 | 5.6 | 38 |

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|------------|---|---|---|--|--|------|----|
| | | 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 | | |
| | | Acrylonitrile | 107-13-1 | 0.24 | 84 | | |
| | | Acrylamide | 79-06-1 | 19 | 23 | | |
| | | Benzene | 71-43-2 | 0.14 | 10 | | |
| | | Cyanide (Total) | 57-12-5 | 1.2 | 590 | | |
| | | K014 | Bottoms from the acetonitrile purification column in the production of acrylonitrile. | Acetonitrile | 75-05-8 | 5.6 | 38 |
| | | | | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| | Acrylamide | 79-06-1 | | 19 | 23 | | |
| | Benzene | 71-43-2 | | 0.14 | 10 | | |
| | Cyanide (Total) | 57-12-5 | | 1.2 | 590 | | |
| K015 | Still bottoms from the distillation of benzyl chloride. | Anthracene | 120-12-7 | 0.059 | 3.4 | | |
| | | Benzal chloride | 98-87-3 | 0.055 | 6.0 | | |
| | | Benzo(b)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 | | |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 0.60 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 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 |

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|-----------------------|--|---------------------------------|-------------------------|--|--|
| | | 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. | Pentachloroethane | 76-01-7 | NA | 6.0 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| | | 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 |

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|------------|---|---|-------------------------|--|--|
| | | 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 |
| | | | | | |
| | | 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 | 2.1 <u>1.15</u> mg/l TCLP |
| K022 | Distillation bottom tars from the production of phenol/acetone from cumene. | Toluene | 108-88-3 | 0.080 | 10 |
| | | Acetophenone | 96-86-2 | 0.010 | 9.7 |
| | | Diphenylamine (difficult to distinguish from diphenylnitrosamine) | 122-39-4 | 0.92 | 13 |
| | | Diphenylnitrosamine (difficult to distinguish from diphenylamine) | 86-30-6 | 0.92 | 13 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 <u>11</u> 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 |

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|------------|--|---|-------------------------|--|--|
| | | 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 |
| 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 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |

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|-----------------------|--|---------------------------------|---|--|--|-------|-----|
| | | 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 | | |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 | | |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 | | |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 | | |
| | | Cadmium | 7440-43-9 | 0.69 | NA | | |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP | | |
| | | Lead | 7439-92-1 | 0.69 | 0.37 <u>0.75</u> mg/l TCLP | | |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 <u>11</u> 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 | | |

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|------------|---|-------------------------------------|-------------------------|--|--|
| | | 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 |
| | | Hexachloropropylene | 1888-71-7 | NA | 30 |
| | | Pentachlorobenzene | 608-93-5 | NA | 10 |
| | | Pentachloroethane | 76-01-7 | NA | 6.0 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| K031 | By-product salts generated in the production of MSMA and cacodylic acid. | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| K032 | Wastewater treatment sludge from the production of chlordane. | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| | | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| | | Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| K033 | Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane. | 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| K035 | Wastewater treatment sludges generated in the production of creosote. | Acenaphthene | 83-32-9 | NA | 3.4 |
| | | Anthracene | 120-12-7 | NA | 3.4 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| | | Dibenz(a,h)anthracene | 53-70-3 | NA | 8.2 |
| | | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| | | Fluorene | 86-73-7 | NA | 3.4 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | NA | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| Pyrene | 129-00-0 | 0.067 | 8.2 | | |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| 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 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

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|------------|---|---|-------------------------|--|--|
| | | 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 |
| K043 | 2,6-Dichlorophenol waste from the production of 2,4-D. | 2,4-Dichlorophenol | 120-83-2 | 0.044 | 14 |
| | | 2,6-Dichlorophenol | 187-65-0 | 0.044 | 14 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All 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 |

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|------------|--|---------------------------------|-------------------------|--|--|
| | | 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 |
| K045 | Spent carbon from the treatment of wastewater containing explosives. | NA | NA | DEACT | DEACT |
| K046 | Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds. | Lead | 7439-92-1 | 0.69 | 0.37 0.75 mg/l TCLP |
| K047 | Pink/red water form TNT operations | NA | NA | DEACT | DEACT |
| K048 | Dissolved air flotation (DAF) float from the petroleum refining industry. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-33 | 0.080 | 10 |

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|------------|---|--|-------------------------|--|--|
| | | 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 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 5.0 <u>11</u> mg/l TCLP |
| K049 | Slop oil emulsion solids from the petroleum refining industry. | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Carbon disulfide | 75-15-0 | 3.8 | NA |
| | | Chrysene | 2218-01-9 | 0.059 | 3.4 |
| | | 2,4-Dimethylphenol | 105-67-9 | 0.036 | NA |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

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|------------|---|--|-------------------------|--|--|
| | | 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 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 5.0 <u>11</u> 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 | 0.86 <u>0.60</u> mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | NA |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 | NA | 5.0 <u>11</u> 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 |

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|------------|---|--|---|--|--|-------|-----|
| | | 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 | | |
| | | Toluene | 108-88-3 | 0.08 | 10 | | |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 | | |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 | | |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP | | |
| | | Lead | 7439-92-1 | 0.69 | NA | | |
| | | Nickel | 7440-02-0 | NA | 5.0 <u>11</u> mg/l TCLP | | |
| | | K052 | Tank bottoms (leaded) from the petroleum refining industry. | Benzene | 71-43-2 | 0.14 | 10 |
| | | | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | o-Cresol | 95-48-7 | | 0.11 | 5.6 | | |
| | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | | 0.77 | 5.6 | | |
| | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | | 0.77 | 5.6 | | |
| | 2,4-Dimethylphenol | 105-67-9 | | 0.036 | NA | | |
| | Ethylbenzene | 100-41-4 | | 0.057 | 10 | | |

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|-------------------------------|---|--|---|--|--|
| | | 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 |
| | | Toluene | 108-88-3 | 0.08 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 5.0 <u>11</u> mg/l TCLP |
| | | K060 | Ammonia still lime sludge from coking operations. | Benzene | 71-43-2 |
| 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 | Antimony | 7440-36-0 | NA | 2.4 <u>1.15</u> mg/l TCLP |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 | NA | 5.0 mg/l TCLP |
| | | Barium | 7440-39-3 | NA | 7.6 <u>21</u> mg/l TCLP |
| | | Beryllium | 7440-41-7 | NA | 0.14 <u>1.22</u> mg/l TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | 0.19 <u>0.11</u> mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 <u>0.75</u> mg/l TCLP |
| | | Mercury | 7439-97-6 | NA | 0.025 mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 <u>11</u> mg/l TCLP |
| | | Selenium | 7782-49-2 | NA | 0.16 <u>5.7</u> mg/l TCLP |
| | | Silver | 7440-22-4 | NA | 0.30 <u>0.14</u> mg/l TCLP |
| | | Thallium | 7440-28-0 | NA | 0.078 <u>0.20</u> mg/l TCLP |
| | | Zinc | 7440-66-6 | NA | 5.3 <u>4.3</u> mg/l TCLP |

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|------------|--|---------------------------------|-------------------------|--|--|
| | | 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 |
| 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 | 0.86 <u>0.60</u> mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 <u>0.75</u> 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 | 0.19 <u>0.11</u> mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 <u>0.75</u> mg/l TCLP |
| | Emission control dust/sludge from secondary lead smelting. - Non-Calcium Sulfate (High Lead) Subcategory | NA | NA | NA | RLEAD |
| K071 | K071 (Brine purification muds from the mercury cell process in chlorine production, where separately prepurified brine is not used) nonwastewaters that are residues from RMERC. | Mercury | 7439-97-6 | NA | 0.02 <u>0.20</u> mg/l TCLP |

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|------------|---|---|-------------------------|--|--|
| | | 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 |
| | 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 |

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|------------|--|--|-------------------------|--|--|
| | | 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 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 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 |

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

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| | | 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 | 0.86 0.60 mg/l TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | 0.37 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 |

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|------------|---|--|-------------------------|--|--|
| | | 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 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.37 <u>0.75</u> mg/l TCLP |
| K088 | Spent potliners from primary aluminum reduction | Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene | 207-08-9 | 0.11 | 6.8 |
| | | Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 1.8 |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| | | 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 |
| | | Benanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Antimony | 7440-36-0 | 1.9 | 2.1 <u>1.15</u> mg/l TCLP. |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 <u>26.1</u> mg/l TCLP |
| | | Barium | 7440-39-3 | 1.2 | 7.6 <u>21</u> mg/l TCLP. |
| | | Beryllium | 7440-41-7 | 0.82 | 0.014 <u>1.22</u> mg/l TCLP. |
| | | Cadmium | 7440-43-9 | 0.69 | 0.19 <u>0.11</u> mg/l TCLP. |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP. |
| | | Lead | 7439-92-1 | 0.69 | .37 <u>0.75</u> mg/l TCLP. |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

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|------------|--|---|-------------------------|--|--|
| | | 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 |
| | | Mercury | 7439-97-6 | 0.15 | 0.025 mg/l TCLP. |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 <u>11</u> mg/l TCLP. |
| | | Selenium | 7782-49-2 | 0.82 | 0.16 <u>5.7</u> mg/l TCLP. |
| | | Silver | 7440-22-4 | 0.43 | 0.30 <u>0.14</u> 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 | 48 mg/l TCLP <u>NA</u> |
| K093 | Distillation light ends from the production of phthalic anhydride from ortho-xylene. | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| K094 | Distillation bottoms from the production of phthalic anhydride from ortho-xylene. | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| K095 | Distillation bottoms from the | Hexachloroethane | 67-72-1 | 0.055 | 30 |

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|------------|--|-------------------------------------|---|--|--|
| | | 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 |
| | | 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 |
| | | Pentachloroethane | 76-01-7 | 0.055 | 6.0 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| K097 | Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane. | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| | | Heptachlor | 76-44-8 | 0.0012 | 0.066 |

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|------------|--|---|-------------------------|--|--|
| | | 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 |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| | | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| K098 | Untreated process wastewater from the production of toxaphene. | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| K099 | Untreated wastewater from the production of 2,4-D. | 2,4-Dichlorophenoxyacetic acid | 94-75-7 | 0.72 | 10 |
| | | HxCDDs (All 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 |
| K100 | Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting. | Cadmium | 7440-43-9 | 0.69 | 0.19 <u>0.11</u> mg/l TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> mg/l TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.37 <u>0.75</u> mg/l TCLP |
| K101 | Distillation tar residues from the | o-Nitroaniline | 88-74-4 | 0.27 | 14 |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 | 5.0 mg/l TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | NA |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Mercury | 7439-97-6 | 0.15 | NA |
| K102 | Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | o-Nitrophenol | 88-75-5 | 0.028 | 13 |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | NA |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Mercury | 7439-97-6 | 0.15 | NA |
| K103 | Process residues from aniline extraction from the production of aniline. | Aniline | 62-53-3 | 0.81 | 14 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| K104 | Combined wastewater streams generated from nitrobenzene/ aniline production. | Aniline | 62-53-3 | 0.81 | 14 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| K105 | Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| K106 | K106 (wastewater treatment sludge from the mercury cell process in chlorine production) nonwastewaters that contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | RMERC |
| | K106 (wastewater treatment sludge from the mercury cell process in chlorine production) nonwastewaters that contain less than 260 mg/kg total mercury that are residues from RMERC. | Mercury | 7439-97-6 | NA | 0.20 mg/l TCLP |
| | Other K106 nonwastewaters that contain less than 260 mg/kg total mercury and are not residues from RMERC. | Mercury | 7439-97-6 | NA | 0.025 mg/l TCLP |
| | All K106 wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| K107 | Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K108 | Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |

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|------------|--|---------------------------------|-------------------------|--|--|
| | | 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 |
| K109 | Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K110 | Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K111 | Product washwaters from the production of dinitrotoluene via nitration of toluene | 2,4-Dinitrotoluene | 121-1-2 | 0.32 | 140 |
| | | 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 28 |
| K112 | Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K113 | Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | NA | NA | CARBN; OR CMBST | CMBST |
| K114 | Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | NA | NA | CARBN; or CMBST | CMBST |

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| | | 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 |
| K115 | Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | Nickel | 7440-02-0 | 3.98 | 11 mg/l TCLP |
| | | NA | NA | CARBN; or CMBST | CMBST |
| K116 | Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosgenation of toluenediamine. | NA | NA | CARBN; or CMBST | CMBST |
| K117 | Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| K118 | Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| K123 | Process wastewater (including supernates, filtrates, and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |

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| | | 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 |
| K124 | Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |
| K125 | Filtration, evaporation, and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |
| K126 | Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |
| K131 | Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| K132 | Spent absorbent and wastewater separator solids from the production of methyl bromide. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| K136 | Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| K141 | Process residues from the recovery of | Benzene | 71-43-2 | 0.14 | 10 |

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|---|---|---|--|--|--|-------|-----|
| | | 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 | | |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 | | |
| | | Benzo(a)pyrene | 50-2-8 | 0.061 | 3.4 | | |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 | | |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 | | |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 | | |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 | | |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 | | |
| | | K142 | Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| Benzo(a)pyrene | 50-32-8 | | | 0.061 | 3.4 | | |
| Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | | | 0.11 | 6.8 | | |
| Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | | | 0.11 | 6.8 | | |
| Chrysene | 218-01-9 | | | 0.059 | 3.4 | | |
| Dibenz(a,h)anthracene | 53-70-3 | | | 0.055 | 8.2 | | |

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|------------|---|---|-------------------------|--|--|
| | | 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 |
| | | | | Indeno(1,2,3-cd)pyrene | 193-39-5 |
| K143 | Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters, and wash oil recovery units from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| K144 | Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

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| 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 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | | | | |
| K145 | Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| K147 | Tar storage tank residues from coal tar refining. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |

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|------------|--|---|-------------------------|--|--|
| | | 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 |
| K148 | Residues from coal tar distillation, including, but not limited to, still bottoms. | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| K149 | Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. (This waste does not include still bottoms from the distillations of benzyl chloride.) | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Chloromethane | 74-87-3 | 0.19 | 30 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| | | | | | |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| K150 | Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Chloromethane | 74-87-3 | 0.19 | 30 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| K151 | Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides, and compounds with mixtures of these functional groups. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

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|------------|--|---------------------------------|-------------------------|--|--|
| | | 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 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| K156 | Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes. ¹⁰ (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.) | Acetonitrile | 75-05-8 | 5.6 | 38 1.8 |
| | | Acetophenone | 96-86-2 | 0.010 | 9.7 |
| | | Aniline | 62-53-3 | 0.81 | 14 |
| | | Benomyl | 17804-35-2 | 0.056 | 1.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Carbaryl | 63-25-2 | 0.006 | 0.14 |
| | | Carbenzadim | 10605-21-7 | 0.056 | 1.4 |
| | | Carbofuran | 1563-66-2 | 0.006 | 0.14 |
| | | Carbosulfan | 55285-14-8 | 0.028 | 1.4 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | Methomyl | 16752-77-5 | 0.028 | 0.14 |

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|---------------------|---|---------------------------------|---|--|--|
| | | 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 | 30 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyridine | 110-86-1 | 0.014 | 16 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Triethylamine | 121-44-8 | 0.081 | 1.5 |
| | | K157 | Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. ¹⁰ (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.) | Carbon tetrachloride | 56-23-5 |
| Chloroform | 67-66-3 | | | 0.046 | 6.0 |
| Chloromethane | 74-87-3 | | | 0.19 | 30 |
| Methomyl | 16752-77-5 | | | 0.028 | 0.14 |
| Methylene chloride | 75-09-2 | | | 0.089 | 30 |
| Methyl ethyl ketone | 78-93-3 | | | 0.28 | 36 |
| o-Phenylenediamine | 95-54-5 | | | 0.056 | 5.6 |
| Pyridine | 110-86-1 | | | 0.014 | 16 |
| Triethylamine | 121-44-8 | | | 0.081 | 1.5 |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| K158 | Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes. ¹⁰ (This listing does not apply to wastes generated from the manufacture of 3-iodo-2-propynyl n-butylcarbamate.) | Benomyl | 17804-35-2 | 0.056 | 1.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Carbenzadim | 10605-21-7 | 0.056 | 1.4 |
| | | Carbofuran | 1563-66-2 | 0.006 | 0.14 |
| | | Carbosulfan | 55285-14-8 | 0.028 | 1.4 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| K159 | Organics from the treatment of thiocarbamate wastes. ¹⁰ | Benzene | 71-43-2 | 0.14 | 10 |
| | | Butylate | 2008-41-5 | 0.042 | 1.4 |
| | | EPTC (Eptam) | 759-94-4 | 0.042 | 1.4 |
| | | Molinate | 2212-67-1 | 0.042 | 1.4 |
| | | Pebulate | 1114-71-2 | 0.042 | 1.4 |
| | | Vernolate | 1929-77-7 | 0.042 | 1.4 |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| K161 | Purification solids (including filtration, evaporation, and centrifugation solids), baghouse dust and floor sweepings from the production of dithiocarbamate acids and their salts. ¹⁰ | Antimony | 7440-36-0 | 1.9 | 2.4 <u>1.15</u> mg/l TCLP |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| | | Carbon disulfide | 75-15-0 | 3.8 | 4.8 mg/l TCLP |
| | | Dithiocarbamates (total) | NA | 0.028 | 28 |
| | | Lead | 7439-92-1 | 0.69 | 3.7 <u>0.75</u> mg/l TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 5.0 <u>11</u> mg/l TCLP |
| | | Selenium | 7782-49-2 | 0.82 | 16 <u>5.7</u> mg/l TCLP |
| K169 | <u>Crude oil tank sediment from petroleum refining operations.</u> | <u>Benz(a)anthracene</u> | <u>56-55-3</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Benzene</u> | <u>71-43-2</u> | <u>0.14</u> | <u>10</u> |
| | | <u>Benzo(g,h,i)perylene</u> | <u>191-24-2</u> | <u>0.0055</u> | <u>1.8</u> |
| | | <u>Chrysene</u> | <u>218-01-9</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Ethyl benzene</u> | <u>100-41-4</u> | <u>0.057</u> | <u>10</u> |
| | | <u>Fluorene</u> | <u>86-73-7</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Naphthalene</u> | <u>91-20-3</u> | <u>0.059</u> | <u>5.6</u> |
| | | <u>Phenanthrene</u> | <u>81-05-8</u> | <u>0.059</u> | <u>5.6</u> |

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| | | 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 |
| | | <u>Pyrene</u> | <u>129-00-0</u> | <u>0.067</u> | <u>8.2</u> |
| | | <u>Toluene (Methyl Benzene)</u> | <u>108-88-3</u> | <u>0.080</u> | <u>10</u> |
| | | <u>Xylene(s) (Total)</u> | <u>1330-20-7</u> | <u>0.32</u> | <u>30</u> |
| <u>K170</u> | <u>Clarified slurry oil sediment from petroleum refining operations.</u> | <u>Benz(a)anthracene</u> | <u>56-55-3</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Benzene</u> | <u>71-43-2</u> | <u>0.14</u> | <u>10</u> |
| | | <u>Benzo(g,h,i)perylene</u> | <u>191-24-2</u> | <u>0.0055</u> | <u>1.8</u> |
| | | <u>Chrysene</u> | <u>218-01-9</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Dibenz(a,h)anthracene</u> | <u>53-70-3</u> | <u>0.055</u> | <u>8.2</u> |
| | | <u>Ethyl benzene</u> | <u>100-41-4</u> | <u>0.057</u> | <u>10</u> |
| | | <u>Fluorene</u> | <u>86-73-7</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Indeno(1,2,3,-cd)pyrene</u> | <u>193-39-5</u> | <u>0.0055</u> | <u>3.4</u> |
| | | <u>Naphthalene</u> | <u>91-20-3</u> | <u>0.059</u> | <u>5.6</u> |
| | | <u>Phenanthrene</u> | <u>81-05-8</u> | <u>0.059</u> | <u>5.6</u> |
| | | <u>Pyrene</u> | <u>129-00-0</u> | <u>0.067</u> | <u>8.2</u> |
| | | <u>Toluene (Methyl Benzene)</u> | <u>108-88-3</u> | <u>0.080</u> | <u>10</u> |

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| | | 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 |
| | | <u>Xylene(s) (Total)</u> | <u>1330-20-7</u> | <u>0.32</u> | <u>30</u> |
| <u>K171</u> | <u>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.)</u> | <u>Benz(a)anthracene</u> | <u>56-55-3</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Benzene</u> | <u>71-43-2</u> | <u>0.14</u> | <u>10</u> |
| | | <u>Chrysene</u> | <u>218-01-9</u> | <u>0.059</u> | <u>3.4</u> |
| | | <u>Ethyl benzene</u> | <u>100-41-4</u> | <u>0.057</u> | <u>10</u> |
| | | <u>Naphthalene</u> | <u>91-20-3</u> | <u>0.059</u> | <u>5.6</u> |
| | | <u>Phenanthrene</u> | <u>81-05-8</u> | <u>0.059</u> | <u>5.6</u> |
| | | <u>Pyrene</u> | <u>129-00-0</u> | <u>0.067</u> | <u>8.2</u> |
| | | <u>Toluene (Methyl Benzene)</u> | <u>108-88-3</u> | <u>0.080</u> | <u>10</u> |
| | | <u>Xylene(s) (Total)</u> | <u>1330-20-7</u> | <u>0.32</u> | <u>30</u> |
| | | <u>Arsenic</u> | <u>7740-38-2</u> | <u>1.4</u> | <u>5 mg/l TCLP</u> |
| | | <u>Nickel</u> | <u>7440-02-0</u> | <u>3.98</u> | <u>11.0 mg/l TCLP</u> |
| | <u>Vanadium</u> | <u>7440-62-2</u> | <u>4.3</u> | <u>1.6 mg/l TCLP</u> | |
| | <u>Reactive sulfides</u> | <u>NA</u> | <u>DEACT</u> | <u>DEACT</u> | |
| <u>K172</u> | <u>Spent hydrorefining catalyst from</u> | <u>Benzene</u> | <u>71-43-2</u> | <u>0.14</u> | <u>10</u> |

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| | | 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 |
| | | <u>Ethyl benzene</u> | <u>100-41-4</u> | <u>0.057</u> | <u>10</u> |
| | | <u>Toluene (Methyl Benzene)</u> | <u>108-88-3</u> | <u>0.080</u> | <u>10</u> |
| | | <u>Xylene(s) (Total)</u> | <u>1330-20-7</u> | <u>0.32</u> | <u>30</u> |
| | | <u>Antimony</u> | <u>7740-36-0</u> | <u>1.9</u> | <u>1.15 mg/l TCLP</u> |
| | | <u>Arsenic</u> | <u>7740-38-2</u> | <u>1.4</u> | <u>5 mg/l TCLP</u> |
| | | <u>Nickel</u> | <u>7440-02-0</u> | <u>3.98</u> | <u>11.0 mg/l TCLP</u> |
| | | <u>Vanadium</u> | <u>7440-62-2</u> | <u>4.3</u> | <u>1.6 mg/l TCLP</u> |
| | | <u>Reactive Sulfides</u> | <u>NA</u> | <u>DEACT</u> | <u>DEACT</u> |
| K174 | <u>Wastewater treatment sludges from the production of ethylene dichloride or vinyl chloride monomer.</u> | <u>1,2,3,4,6,7,8-Heptachlorodibenzo- p- dioxin (1,2,3,4,6,7,8- HpCDD)</u> | <u>35822-46-9</u> | <u>0.000035 or CMBST¹¹</u> | <u>0.0025 or CMBST¹¹</u> |
| | | <u>1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8- HpCDF)</u> | <u>67562-39-4</u> | <u>0.000035 or CMBST¹¹</u> | <u>0.0025 or CMBST¹¹</u> |
| | | <u>1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9- HpCDF)</u> | <u>55673-89-7</u> | <u>0.000035 or CMBST¹¹</u> | <u>0.0025 or CMBST¹¹</u> |
| | | <u>HxCDDs (All Hexachlorodibenzo- p-dioxins)</u> | <u>34465-46-8</u> | <u>0.000063 or CMBST¹¹</u> | <u>0.001 or CMBST¹¹</u> |

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|-------------|--|---|-------------------------|--|--|
| | | 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 |
| | | <u>HxCDFs (All Hexachlorodibenzofurans)</u> | <u>55684-94-1</u> | <u>0.000063 or CMBST¹¹</u> | <u>0.001 or CMBST¹¹</u> |
| | | <u>1,2,3,4,6,7,8,9-Octachlorodibenzo- p-dioxin (OCDD)</u> | <u>3268-87-9</u> | <u>0.000063 or CMBST¹¹</u> | <u>0.005 or CMBST¹¹</u> |
| | | <u>1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)</u> | <u>39001-02-0</u> | <u>0.000063 or CMBST¹¹</u> | <u>0.005 or CMBST¹¹</u> |
| | | <u>PeCDDs (All Pentachlorodibenzo- p-dioxins)</u> | <u>36088-22-9</u> | <u>0.000063 or CMBST¹¹</u> | <u>0.001 or CMBST¹¹</u> |
| | | <u>PeCDFs (All Pentachlorodibenzofurans)</u> | <u>30402-15-4</u> | <u>0.000035 or CMBST¹¹</u> | <u>0.001 or CMBST¹¹</u> |
| | | <u>TCDDs (All Tetachlorodibenzo- p-dioxins)</u> | <u>41903-57-5</u> | <u>0.000063 or CMBST¹¹</u> | <u>0.001 or CMBST¹¹</u> |
| | | <u>TCDFs (All Tetrachlorodibenzofurans)</u> | <u>55722-27-5</u> | <u>0.000063 or CMBST¹¹</u> | <u>0.001 or CMBST¹¹</u> |
| | | <u>Arsenic</u> | <u>7440-36-0</u> | <u>1.4</u> | <u>5.0 mg/ L TCLP</u> |
| <u>K175</u> | <u>Wastewater treatment sludge from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene- based process</u> | <u>Mercury¹²</u> | <u>7438-97-6</u> | <u>NA</u> | <u>0.025 mg/ L TCLP</u> |
| | | <u>pH¹²</u> | | <u>NA</u> | <u>pH ≤ 6.0</u> |
| | <u>All K175 wastewaters</u> | <u>Mercury</u> | <u>7438-97-6</u> | <u>0.15</u> | <u>NA</u> |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| P001 | Warfarin, & salts, when present at concentrations greater than 0.3% | Warfarin | 81-81-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P002 | 1-Acetyl-2-thiourea | 1-Acetyl-2-thiourea | 591-08-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P003 | Acrolein | Acrolein | 107-02-8 | 0.29 | CMBST |
| P004 | Aldrin | Aldrin | 309-00-2 | 0.021 | 0.066 |
| P005 | Allyl alcohol | Allyl alcohol | 107-18-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P006 | Aluminum phosphide | Aluminum phosphide | 20859-73-8 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| P007 | 5-Aminomethyl 3-isoxazolol | 5-Aminomethyl 3-isoxazolol | 2763-96-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P008 | 4-Aminopyridine | 4-Aminopyridine | 504-24-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

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|------------|---|----------------------------------|-------------------------|--|--|
| | | 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 |
| P009 | Ammonium picrate | Ammonium picrate | 131-74-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| P010 | Arsenic acid | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| P011 | Arsenic pentoxide | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| P012 | Arsenic trioxide | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| P013 | Barium cyanide | Barium | 7440-39-3 | NA | 21 mg/l TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P014 | Thiophenol (Benzene thiol) | Thiophenol (Benzene thiol) | 108-98-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P015 | Beryllium dust | Beryllium | 7440-41-7 | RMETL; or RTHRM | RMETL; or RTHRM |
| P016 | Dichloromethyl ether (Bis(chloromethyl)ether) | Dichloromethyl ether | 542-88-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

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|------------|---|---|-------------------------|--|--|
| | | 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 |
| P017 | Bromoacetone | Bromoacetone | 598-31-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P018 | Brucine | Brucine | 357-57-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P020 | 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | 88-85-7 | 0.066 | 2.5 |
| P021 | Calcium cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P022 | Carbon disulfide | Carbon disulfide | 75-15-0 | 3.8 | CMBST |
| | | Carbon disulfide; alternate ⁶ standard for nonwastewaters only | 75-15-0 | NA | 4.8 mg/l TCLP |
| P023 | Chloroacetaldehyde | Chloroacetaldehyde | 107-20-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P024 | p-Chloroaniline | p-Chloroaniline | 106-47-8 | 0.46 | 16 |
| P026 | 1-(o-Chlorophenyl)thiourea | 1-(o-Chlorophenyl)thiourea | 5344-82-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

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|------------|---|----------------------------------|-------------------------|--|--|
| | | 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 |
| P027 | 3-Chloropropionitrile | 3-Chloropropionitrile | 542-76-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P028 | Benzyl chloride | Benzyl chloride | 100-44-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P029 | Copper cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P030 | Cyanides (soluble salts and complexes) | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P031 | Cyanogen | Cyanogen | 460-19-5 | CHOXD; WETOX; or CMBST | CHOXD; WETOX; or CMBST |
| P033 | Cyanogen chloride | Cyanogen chloride | 506-77-4 | CHOXD; WETOX; or CMBST | CHOXD; WETOX; or CMBST |
| P034 | 2-Cyclohexyl-4,6-dinitrophenol | 2-Cyclohexyl-4,6-dinitrophenol | 131-89-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P036 | Dichlorophenylarsine | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| P037 | Dieldrin | Dieldrin | 60-57-1 | 0.017 | 0.13 |
| P038 | Diethylarsine | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |

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|------------|---|--|-------------------------|--|--|
| | | 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 |
| P039 | Disulfoton | Disulfoton | 298-04-4 | 0.017 | 6.2 |
| P040 | 0,0-Diethyl O-pyrazinyl phosphorothioate | 0,0-Diethyl O-pyrazinyl phosphorothioate | 297-97-2 | CARBN; or CMBST | CMBST |
| P041 | Diethyl-p-nitrophenyl phosphate | Diethyl-p-nitrophenyl phosphate | 311-45-5 | CARBN; or CMBST | CMBST |
| P042 | Epinephrine | Epinephrine | 51-43-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P043 | Diisopropylfluorophosphate (DFP) | Diisopropylfluorophosphate (DFP) | 55-91-4 | CARBN; or CMBST | CMBST |
| P044 | Dimethoate | Dimethoate | 60-51-5 | CARBN; or CMBST | CMBST |
| P045 | Thiofanox | Thiofanox | 39196-18-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P046 | alpha, alpha-Dimethylphenethylamine | alpha, alpha-Dimethylphenethylamine | 122-09-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P047 | 4,6-Dinitro-o-cresol | 4,6-Dinitro-o-cresol | 543-52-1 | 0.28 | 160 |

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|------------|---|---|-------------------------|--|--|
| | | 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 |
| | 4,6-Dinitro-o-cresol salts | NA | NA | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P048 | 2,4-Dinitrophenol | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| P049 | Dithiobiuret | Dithiobiuret | 541-53-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P050 | Endosulfan | Endosulfan I | 939-98-8 | 0.023 | 0.066 |
| | | Endosulfan II | 33213-6-5 | 0.029 | 0.13 |
| | | Endosulfan sulfate | 1031-07-8 | 0.029 | 0.13 |
| P051 | Endrin | Endrin | 72-20-8 | 0.0028 | 0.13 |
| | | Endrin aldehyde | 7421-93-4 | 0.025 | 0.13 |
| P054 | Aziridine | Aziridine | 151-56-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P056 | Fluorine | Fluoride (measured in wastewaters only) | 16964-48-8 | 35 | ADGAS fb NEUTR |

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|------------|--|----------------------------------|-------------------------|--|--|
| | | 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 |
| P057 | Fluoroacetamide | Fluoroacetamide | 640-19-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P058 | Fluoroacetic acid, sodium salt | Fluoroacetic acid, sodium salt | 62-74-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P059 | Heptachlor | Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| P060 | Isodrin | Isodrin | 465-73-6 | 0.021 | 0.066 |
| P062 | Hexaethyl tetraphosphate | Hexaethyl tetraphosphate | 757-58-4 | CARBN; or CMBST | CMBST |
| P063 | Hydrogen cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P064 | Isocyanic acid, ethyl ester | Isocyanic acid, ethyl ester | 624-83-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P065 | Mercury fulminate nonwastewaters, regardless of their total mercury content, that are not incinerator residues or are not residues from RMERC. | Mercury | 7439-97-6 | NA | IMERC |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| | Mercury fulminate nonwastewaters that are either incinerator residues or are residues from RMERC; and contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | RMERC |
| | Mercury fulminate nonwastewaters that are residues from RMERC and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.20 mg/l TCLP |
| | Mercury fulminate nonwastewaters that are incinerator residues and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.025 mg/l TCLP |
| | All mercury fulminate wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| | P066 | Methomyl | Methomyl | 16752-77-5 | (WETOX or CHOXD) fb CARBN; or CMBST |
| P067 | 2-Methyl-aziridine | 2-Methyl-aziridine | 75-55-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P068 | Methyl hydrazine | Methyl hydrazine | 60-34-4 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |

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|------------|---|----------------------------------|-------------------------|--|--|
| | | 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 |
| P069 | 2-Methylactonitrile | 2-Methylactonitrile | 75-86-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P070 | Aldicarb | Aldicarb | 116-06-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P071 | Methyl parathion | Methyl parathion | 298-00-0 | 0.014 | 4.6 |
| P072 | 1-Naphthyl-2-thiourea | 1-Naphthyl-2-thiourea | 86-88-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P073 | Nickel carbonyl | Nickel | 7440-02-0 | 3.98 | 11 mg/l TCLP |
| P074 | Nickel cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/l TCLP |
| P075 | Nicotine and salts | Nicotine and salts | 54-11-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P076 | Nitric oxide | Nitric oxide | 10102-43-9 | ADGAS | ADGAS |

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|------------|--|---------------------------------|-------------------------|--|--|
| | | 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 |
| P077 | p-Nitroaniline | p-Nitroaniline | 100-01-6 | 0.028 | 28 |
| P078 | Nitrogen dioxide | Nitrogen dioxide | 10102-44-0 | ADGAS | ADGAS |
| P081 | Nitroglycerin | Nitroglycerin | 55-63-0 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| P082 | N-Nitrosodimethylamine | N-Nitrosodimethylamine | 62-75-9 | 0.40 | 2.3 |
| P084 | N-Nitrosomethylvinylamine | N-Nitrosomethylvinylamine | 4549-40-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P085 | Octamethylpyrophosphoramidate | Octamethylpyrophosphoramidate | 152-16-9 | CARBN; or CMBST | CMBST |
| P087 | Osmium tetroxide | Osmium tetroxide | 20816-12-0 | RMETL; or RTHRM | RMETL; or RTHRM |
| P088 | Endothall | Endothall | 145-73-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P089 | Parathion | Parathion | 56-38-2 | 0.014 | 4.6 |
| P092 | Phenyl mercuric acetate nonwastewaters, regardless of their total mercury content, that are not incinerator residues or are not residues from RMERC. | Mercury | 7439-97-6 | NA | IMERC; or RMERC |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| | Phenyl mercuric acetate nonwastewaters that are either incinerator residues or are residues from RMERC; and still contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | RMERC |
| | Phenyl mercuric acetate nonwastewaters that are residues from RMERC and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.20 mg/l TCLP |
| | Phenyl mercuric acetate nonwastewaters that are incinerator residues and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.025 mg/l TCLP |
| | All phenyl mercuric acetate wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| P093 | Phenylthiourea | Phenylthiourea | 103-85-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P094 | Phorate | Phorate | 298-02-2 | 0.021 | 4.6 |
| P095 | Phosgene | Phosgene | 75-44-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

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|------------|---|----------------------------------|-------------------------|--|--|
| | | 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 |
| P096 | Phosphine | Phosphine | 7803-51-2 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| P097 | Famphur | Famphur | 52-85-7 | 0.017 | 15 |
| P098 | Potassium cyanide. | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P099 | Potassium silver cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Silver | 7440-22-4 | 0.43 | 0.14 mg/l TCLP |
| P101 | Ethyl cyanide (Propanenitrile) | Ethyl cyanide (Propanenitrile) | 107-12-0 | 0.24 | 360 |
| P102 | Propargyl alcohol | Propargyl alcohol | 107-19-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P103 | Selenourea | Selenium | 7782-49-2 | 0.82 | 5.7 mg/l TCLP |
| P104 | Silver cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Silver | 7440-22-4 | 0.43 | 0.14 mg/l TCLP |
| P105 | Sodium azide | Sodium azide | 26628-22-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| P106 | Sodium cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |

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|------------|---|---|-------------------------|--|--|
| | | 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 (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P108 | Strychnine and salts | Strychnine and salts | 57-24-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P109 | Tetraethyldithiopyrophosphate | Tetraethyldithiopyrophosphate | 3689-24-5 | CARBN; or CMBST | CMBST |
| P110 | Tetraethyl lead | Lead | 7439-92-1 | 0.69 | 0.75 mg/l TCLP |
| P111 | Tetraethylpyrophosphate | Tetraethylpyrophosphate | 107-49-3 | CARBN; or CMBST | CMBST |
| P112 | Tetranitromethane | Tetranitromethane | 509-14-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| P113 | Thallic oxide | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| P114 | Thallium selenite | Selenium | 7782-49-2 | 0.82 | 5.7 mg/l TCLP |
| P115 | Thallium (I) sulfate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| P116 | Thiosemicarbazide | Thiosemicarbazide | 79-19-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

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|------------|---|---|-------------------------|--|--|
| | | 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 |
| P118 | Trichloromethanethiol | Trichloromethanethiol | 75-70-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P119 | Ammonium vanadate | Vanadium (measured in wastewaters only) | 7440-62-2 | 4.3 | STABL |
| P120 | Vanadium pentoxide | Vanadium (measured in wastewaters only) | 7440-62-2 | 4.3 | STABL |
| P121 | Zinc cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P122 | Zinc phosphide Zn ₃ P ₂ , when present at concentrations greater than 10% | Zinc Phosphide | 1314-84-7 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| P123 | Toxaphene | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| P127 | Carbofuran ¹⁰ | Carbofuran | 1563-66-2 | 0.006 | 0.14 |
| P128 | Mexacarbate ¹⁰ | Mexacarbate | 315-18-4 | 0.056 | 1.4 |
| P185 | Tirpate ¹⁰ | Tirpate | 26419-73-8 | 0.056 | 0.28 |
| P188 | Physostigmine salicylate ¹⁰ | Physostigmine salicylate | 57-64-7 | 0.056 | 1.4 |
| P189 | Carbosulfan ¹⁰ | Carbosulfan | 55285-14-8 | 0.028 | 1.4 |
| P190 | Metolcarb ¹⁰ | Metolcarb | 1129-41-5 | 0.056 | 1.4 |

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| 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 |
| P191 | Dimetilan ¹⁰ | Dimetilan | 644-64-4 | 0.056 | 1.4 |
| P192 | Isolan ¹⁰ | Isolan | 119-38-0 | 0.056 | 1.4 |
| P194 | Oxamyl ⁴⁰ | Oxamyl | 23135-22-0 | 0.056 | 0.28 |
| P196 | Manganese dimethyldithiocarbamate ¹⁰ | Dithiocarbamates (total) | NA | 0.028 | 28 |
| P197 | Formparanate ¹⁰ | Formparanate | 17702-57-7 | 0.056 | 1.4 |
| P198 | Formetanate hydrochloride ⁴⁰ | Formetanate hydrochloride | 23422-53-9 | 0.056 | 1.4 |
| P199 | Methiocarb ⁴⁰ | Methiocarb | 2032-65-7 | 0.056 | 1.4 |
| P201 | Promecarb ⁴⁰ | Promecarb | 2631-37-0 | 0.056 | 1.4 |
| P202 | m-Cumenyl methylcarbamate ⁴⁰ | m-Cumenyl methylcarbamate | 64-00-6 | 0.056 | 1.4 |
| P203 | Aldicarb sulfone ⁴⁰ | Aldicarb sulfone | 1646-88-4 | 0.056 | 0.28 |
| P204 | Physostigmine ⁴⁰ | Physostigmine | 57-47-6 | 0.056 | 1.4 |
| P205 | Ziram ⁴⁰ | Dithiocarbamates (total) | NA | 0.028 | 28 |
| U001 | Acetaldehyde | Acetaldehyde | 75-07-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U002 | Acetone | Acetone | 67-64-1 | 0.28 | 160 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

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|------------|---|---|-------------------------|--|--|
| | | 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 |
| U003 | Acetonitrile | Acetonitrile | 75-05-8 | 5.6 | CMBST |
| | | Acetonitrile; alternate ⁶ standard for nonwastewaters only | 75-05-8 | NA | 38 |
| U004 | Acetophenone | Acetophenone | 98-86-2 | 0.010 | 9.7 |
| U005 | 2-Acetylaminofluorene | 2-Acetylaminofluorene | 53-96-3 | 0.059 | 140 |
| U006 | Acetyl chloride | Acetyl Chloride | 75-36-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U007 | Acrylamide | Acrylamide | 79-06-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U008 | Acrylic acid | Acrylic acid | 79-10-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U009 | Acrylonitrile | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| U010 | Mitomycin C | Mitomycin C | 50-07-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| U011 | Amitrole | Amitrole | 61-82-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U012 | Aniline | Aniline | 62-53-3 | 0.81 | 14 |
| U014 | Auramine | Auramine | 492-80-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U015 | Azaserine | Azaserine | 115-02-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U016 | Benz(c)acridine | Benz(c)acridine | 225-51-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U017 | Benzal chloride | Benzal chloride | 98-87-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U018 | Benz(a)anthracene | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| U019 | Benzene | Benzene | 71-43-2 | 0.14 | 10 |
| U020 | Benzenesulfonyl chloride | Benzenesulfonyl chloride | 98-09-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 |
| U021 | Benzidine | Benzidine | 92-87-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U022 | Benzo(a)pyrene | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| U023 | Benzotrichloride | Benzotrichloride | 98-07-7 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U024 | bis(2-Chloroethoxy)methane | bis(2-Chloroethoxy)methane | 111-91-1 | 0.036 | 7.2 |
| U025 | bis(2-Chloroethyl)ether | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| U026 | Chlornaphazine | Chlornaphazine | 494-03-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U027 | bis(2-Chloroisopropyl)ether | bis(2-Chloroisopropyl)ether | 39638-32-9 | 0.055 | 7.2 |
| U028 | bis(2-Ethylhexyl) phthalate | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| U029 | Methyl bromide (Bromomethane) | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| U030 | 4-Bromophenyl phenyl ether | 4-Bromophenyl phenyl ether | 101-55-3 | 0.055 | 15 |
| U031 | n-Butyl alcohol | n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |

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|------------|---|---|-------------------------|--|--|
| | | 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 |
| U032 | Calcium chromate | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/l TCLP |
| U033 | Carbon oxyfluoride | Carbon oxyfluoride | 353-50-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U034 | Trichloroacetaldehyde (Chloral) | Trichloroacetaldehyde (Chloral) | 75-87-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U035 | Chlorambucil | Chlorambucil | 305-03-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U036 | Chlordane | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| U037 | Chlorobenzene | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| U038 | Chlorobenzilate | Chlorobenzilate | 510-15-6 | 0.10 | CMBST |
| U039 | p-Chloro-m-cresol | p-Chloro-m-cresol | 59-50-7 | 0.018 | 14 |
| U041 | Epichlorohydrin (1-Chloro-2,3-epoxypropane) | Epichlorohydrin (1-Chloro-2,3-epoxypropane) | 106-89-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

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|------------|---|------------------------------------|-------------------------|--|--|
| | | 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 |
| U042 | 2-Chloroethyl vinyl ether | 2-Chloroethyl vinyl ether | 110-75-8 | 0.062 | CMBST |
| U043 | Vinyl chloride | Vinyl chloride | 75-01-4 | 0.27 | 6.0 |
| U044 | Chloroform | Chloroform | 67-66-3 | 0.046 | 6.0 |
| U045 | Chloromethane (Methyl chloride) | Chloromethane (Methyl chloride) | 74-87-3 | 0.19 | 30 |
| U046 | Chloromethyl methyl ether | Chloromethyl methyl ether | 107-30-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U047 | 2-Chloronaphthalene | 2-Chloronaphthalene | 91-58-7 | 0.055 | 5.6 |
| U048 | 2-Chlorophenol | 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| U049 | 4-Chloro-o-toluidine hydrochloride | 4-Chloro-o-toluidine hydrochloride | 3165-93-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U050 | Chrysene | Chrysene | 218-01-9 | 0.059 | 3.4 |
| U051 | Creosote | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |

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|------------|---|---|-------------------------|--|--|
| | | 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 |
| U052 | Cresols (Cresylic acid) | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| | | Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations) | 1319-77-3 | 0.88 | 11.2 |
| U053 | Crotonaldehyde | Crotonaldehyde | 4170-30-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U055 | Cumene | Cumene | 98-82-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

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|------------|---|--|-------------------------|--|--|
| | | 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 |
| U056 | Cyclohexane | Cyclohexane | 110-82-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U057 | Cyclohexanone | Cyclohexanone | 108-94-1 | 0.36 | CMBST |
| | | Cyclohexanone; alternate ⁶ standard for nonwastewaters only | 108-94-1 | NA | 0.75 mg/l TCLP |
| U058 | Cyclophosphamide | Cyclophosphamide | 50-18-0 | CARBN; or CMBST | CMBST |
| U059 | Daunomycin | Daunomycin | 20830-81-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U060 | DDD | o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| | | p,p'-DDD | 72-54-8 | 0.023 | 0.087 |
| U061 | DDT | o-p'-DDT | 789-02-6 | 0.0039 | 0.087 |
| | | p,p'-DDT | 50-29-3 | 0.0039 | 0.087 |
| | | o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| | | p,p'-DDD | 72-54-8 | 0.023 | 0.087 |
| | | o,p'-DDE | 3424-82-6 | 0.031 | 0.087 |
| | | p,p'-DDE | 72-55-9 | 0.031 | 0.087 |

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|------------|---|--|-------------------------|--|--|
| | | 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 |
| U062 | Diallate | Diallate | 2303-16-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U063 | Dibenz(a,h)anthracene | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| U064 | Dibenz(a,i)pyrene | Dibenz(a,i)pyrene | 189-55-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U066 | 1,2-Dibromo-3-chloropropane | 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.11 | 15 |
| U067 | Ethylene dibromide (1,2-Dibromoethane) | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| U068 | Dibromomethane | Dibromomethane | 74-95-3 | 0.11 | 15 |
| U069 | Di-n-butyl phthalate | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| U070 | o-Dichlorobenzene | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| U071 | m-Dichlorobenzene | m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| U072 | p-Dichlorobenzene | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| U073 | 3,3'-Dichlorobenzidine | 3,3'-Dichlorobenzidine | 91-94-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

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|------------|---|---------------------------------|-------------------------|--|--|
| | | 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 | CMBST |
| | | trans-1,4-Dichloro-2-butene | 764-41-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U075 | Dichlorodifluoromethane | Dichlorodifluoromethane | 75-71-8 | 0.23 | 7.2 |
| U076 | 1,1-Dichloroethane | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| U077 | 1,2-Dichloroethane | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| U078 | 1,1-Dichloroethylene | 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6.0 |
| U079 | 1,2-Dichloroethylene | trans-1,2-Dichloroethylene | 156-60-5 | 0.054 | 30 |
| U080 | Methylene chloride | Methylene chloride | 75-09-2 | 0.089 | 30 |
| U081 | 2,4-Dichlorophenol | 2,4-Dichlorophenol | 120-83-2 | 0.044 | 14 |
| U082 | 2,6-Dichlorophenol | 2,6-Dichlorophenol | 87-65-0 | 0.044 | 14 |
| U083 | 1,2-Dichloropropane | 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |
| U084 | 1,3-Dichloropropylene | cis-1,3-Dichloropropylene | 10061-01-5 | 0.036 | 18 |
| | | trans-1,3-Dichloropropylene | 10061-02-6 | 0.036 | 18 |

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|------------|---|-------------------------------------|-------------------------|--|--|
| | | 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 |
| U085 | 1,2:3,4-Diepoxybutane | 1,2:3,4-Diepoxybutane | 1464-53-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U086 | N,N'-Diethylhydrazine | N,N'-Diethylhydrazine | 1615-80-1 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U087 | O,O-Diethyl S-methyldithiophosphate | O,O-Diethyl S-methyldithiophosphate | 3288-58-2 | CARBN; or CMBST | CMBST |
| U088 | Diethyl phthalate | Diethyl phthalate | 84-66-2 | 0.20 | 28 |
| U089 | Diethyl stilbestrol | Diethyl stilbestrol | 56-53-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U090 | Dihydrosafrole | Dihydrosafrole | 94-58-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U091 | 3,3'-Dimethoxybenzidine | 3,3'-Dimethoxybenzidine | 119-90-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U092 | Dimethylamine | Dimethylamine | 124-40-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U093 | p-Dimethylaminoazobenzene | p-Dimethylaminoazobenzene | 60-11-7 | 0.13 | CMBST |

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|------------|---|--|-------------------------|--|--|
| | | 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 |
| U094 | 7,12-Dimethylbenz(a)anthracene | 7,12-Dimethylbenz(a)anthracene | 57-97-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U095 | 3,3'-Dimethylbenzidine | 3,3'-Dimethylbenzidine | 119-93-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U096 | alpha, alpha-Dimethyl benzyl hydroperoxide | alpha, alpha-Dimethyl benzyl hydroperoxide | 80-15-9 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U097 | Dimethylcarbamoyl chloride | Dimethylcarbamoyl chloride | 79-44-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U098 | 1,1-Dimethylhydrazine | 1,1-Dimethylhydrazine | 57-14-7 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U099 | 1,2-Dimethylhydrazine | 1,2-Dimethylhydrazine | 540-73-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U101 | 2,4-Dimethylphenol | 2,4-Dimethylphenol | 105-67-9 | 0.036 | 14 |
| U102 | Dimethyl phthalate | Dimethyl phthalate | 131-11-3 | 0.047 | 28 |

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| | | 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 |
| U103 | Dimethyl sulfate | Dimethyl sulfate | 77-78-1 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U105 | 2,4-Dinitrotoluene | 2,4-Dinitrotoluene | 121-14-2 | 0.32 | 140 |
| U106 | 2,6-Dinitrotoluene | 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 28 |
| U107 | Di-n-octyl phthalate | Di-n-octyl phthalate | 117-84-0 | 0.017 | 28 |
| U108 | 1,4-Dioxane | 1,4-Dioxane | 123-91-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | | 1,4-Dioxane; alternate ⁶ | 123-91-1 | 12.0 | 170 |
| U109 | 1,2-Diphenylhydrazine | 1,2-Diphenylhydrazine | 122-66-7 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| | | 1,2-Diphenylhydrazine; alternate ⁶ standard for wastewaters only | 122-66-7 | 0.087 | NA |
| U110 | Dipropylamine | Dipropylamine | 142-84-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

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|------------|---|--|-------------------------|--|--|
| | | 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 |
| U111 | Di-n-propylnitrosamine | Di-n-propylnitrosamine | 621-64-7 | 0.40 | 14 |
| U112 | Ethyl acetate | Ethyl acetate | 141-78-6 | 0.34 | 33 |
| U113 | Ethyl acrylate | Ethyl acrylate | 140-88-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U114 | Ethylenebisdithiocarbamic acid salts and esters | Ethylenebisdithiocarbamic acid | 111-54-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U115 | Ethylene oxide | Ethylene oxide | 75-21-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CHOXD; or CMBST |
| | | Ethylene oxide; alternate ⁶ standard for wastewaters only | 75-21-8 | 0.12 | NA |
| U116 | Ethylene thiourea | Ethylene thiourea | 96-45-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U117 | Ethyl ether | Ethyl ether | 60-29-7 | 0.12 | 160 |
| U118 | Ethyl methacrylate | Ethyl methacrylate | 97-63-2 | 0.14 | 160 |

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| | | 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 |
| U119 | Ethyl methane sulfonate | Ethyl methane sulfonate | 62-50-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U120 | Fluoranthene | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| U121 | Trichloromonofluoromethane | Trichloromonofluoromethane | 75-69-4 | 0.020 | 30 |
| U122 | Formaldehyde | Formaldehyde | 50-00-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U123 | Formic acid | Formic acid | 64-18-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U124 | Furan | Furan | 110-00-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U125 | Furfural | Furfural | 98-01-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U126 | Glycidylaldehyde | Glycidylaldehyde | 765-34-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| U127 | Hexachlorobenzene | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| U128 | Hexachlorobutadiene | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| U129 | Lindane | alpha-BHC | 319-84-6 | 0.00014 | 0.066 |
| | | beta-BHC | 319-85-7 | 0.00014 | 0.066 |
| | | delta-BHC | 319-86-8 | 0.023 | 0.066 |
| | | gamma-BHC (Lindane) | 58-89-9 | 0.0017 | 0.066 |
| U130 | Hexachlorocyclopentadiene | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| U131 | Hexachloroethane | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| U132 | Hexachlorophene | Hexachlorophene | 70-30-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U133 | Hydrazine | Hydrazine | 302-01-2 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U134 | Hydrogen fluoride | Fluoride (measured in wastewaters only) | 16964-48-8 | 35 | ADGAS fb NEUTR; or NEUTR |
| U135 | Hydrogen Sulfide | Hydrogen Sulfide | 7783-06-4 | CHOXD; CHRED, or CMBST | CHOXD; CHRED; or CMBST. |
| U136 | Cacodylic acid | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| U137 | Indeno(1,2,3-c,d)pyrene | Indeno(1,2,3-c,d)pyrene | 193-39-5 | 0.0055 | 3.4 |
| U138 | Iodomethane | Iodomethane | 74-88-4 | 0.19 | 65 |
| U140 | Isobutyl alcohol | Isobutyl alcohol | 78-83-1 | 5.6 | 170 |
| U141 | Isosafrole | Isosafrole | 120-58-1 | 0.081 | 2.6 |
| U142 | Kepone | Kepone | 143-50-8 | 0.0011 | 0.13 |
| U143 | Lasiocarpine | Lasiocarpine | 303-34-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U144 | Lead acetate | Lead | 7439-92-1 | 0.69 | 0.75 mg/l TCLP |
| U145 | Lead phosphate | Lead | 7439-92-1 | 0.69 | 0.75 mg/l TCLP |
| U146 | Lead subacetate | Lead | 7439-92-1 | 0.69 | 0.75 mg/l TCLP |
| U147 | Maleic anhydride | Maleic anhydride | 108-31-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U148 | Maleic hydrazide | Maleic hydrazide | 123-33-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| U149 | Malononitrile | Malononitrile | 109-77-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U150 | Melphalan | Melphalan | 148-82-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U151 | U151 (mercury) nonwastewaters that contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | RMERC |
| | U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are residues from RMERC only. | Mercury | 7439-97-6 | NA | 0.20 mg/l TCLP |
| | U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are not residues from RMERC. | Mercury | 7439-97-6 | NA | 0.025 mg/l TCLP |
| | All U151 (mercury) wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| | Elemental Mercury Contaminated with Radioactive Materials | Mercury | 7439-97-6 | NA | AMLGM |
| U152 | Methacrylonitrile | Methacrylonitrile | 126-98-7 | 0.24 | 84 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| U153 | Methanethiol | Methanethiol | 74-93-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U154 | Methanol | Methanol | 67-56-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | | Methanol; alternate ⁶ set of standards for both wastewaters and nonwastewaters | 67-56-1 | 5.6 | 0.75 mg/l TCLP |
| U155 | Methapyrilene | Methapyrilene | 91-80-5 | 0.081 | 1.5 |
| U156 | Methyl chlorocarbonate | Methyl chlorocarbonate | 79-22-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U157 | 3-Methylcholanthrene | 3-Methylcholanthrene | 56-49-5 | 0.0055 | 15 |
| U158 | 4,4'-Methylene bis(2-chloroaniline) | 4,4'-Methylene bis(2-chloroaniline) | 101-14-4 | 0.50 | 30 |
| U159 | Methyl ethyl ketone | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| U160 | Methyl ethyl ketone peroxide | Methyl ethyl ketone peroxide | 1338-23-4 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U161 | Methyl isobutyl ketone | Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| U162 | Methyl methacrylate | Methyl methacrylate | 80-62-6 | 0.14 | 160 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| U163 | N-Methyl N'-nitro N-nitrosoguanidine | N-Methyl N'-nitro N-nitrosoguanidine | 70-25-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U164 | Methylthiouracil | Methylthiouracil | 56-04-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U165 | Naphthalene | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| U166 | 1,4-Naphthoquinone | 1,4-Naphthoquinone | 130-15-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U167 | 1-Naphthylamine | 1-Naphthylamine | 134-32-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U168 | 2-Naphthylamine | 2-Naphthylamine | 91-59-8 | 0.52 | CMBST |
| U169 | Nitrobenzene | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| U170 | p-Nitrophenol | p-Nitrophenol | 100-02-7 | 0.12 | 29 |
| U171 | 2-Nitropropane | 2-Nitropropane | 79-46-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

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| 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 |
| U172 | N-Nitrosodi-n-butylamine | N-Nitrosodi-n-butylamine | 924-16-3 | 0.40 | 17 |
| U173 | N-Nitrosodiethanolamine | N-Nitrosodiethanolamine | 1116-54-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U174 | N-Nitrosodiethylamine | N-Nitrosodiethylamine | 55-18-5 | 0.40 | 28 |
| U176 | N-Nitroso-N-ethylurea | N-Nitroso-N-ethylurea | 759-73-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U177 | N-Nitroso-N-methylurea | N-Nitroso-N-methylurea | 684-93-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U178 | N-Nitroso-N-methylurethane | N-Nitroso-N-methylurethane | 615-53-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U179 | N-Nitrosopiperidine | N-Nitrosopiperidine | 100-75-4 | 0.013 | 35 |
| U180 | N-Nitrosopyrrolidine | N-Nitrosopyrrolidine | 930-55-2 | 0.013 | 35 |
| U181 | 5-Nitro-o-toluidine | 5-Nitro-o-toluidine | 99-55-8 | 0.32 | 28 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| U182 | Paraldehyde | Paraldehyde | 123-63-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U183 | Pentachlorobenzene | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| U184 | Pentachloroethane | Pentachloroethane | 76-01-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | | Pentachloroethane; alternate ⁶ standards for both wastewaters and nonwastewaters | 76-01-7 | 0.055 | 6.0 |
| U185 | Pentachloronitrobenzene | Pentachloronitrobenzene | 82-68-8 | 0.055 | 4.8 |
| U186 | 1,3-Pentadiene | 1,3-Pentadiene | 504-60-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U187 | Phenacetin | Phenacetin | 62-44-2 | 0.081 | 16 |
| U188 | Phenol | Phenol | 108-95-2 | 0.039 | 6.2 |
| U189 | Phosphorus sulfide | Phosphorus sulfide | 1314-80-3 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| U190 | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| U191 | 2-Picoline | 2-Picoline | 109-06-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U192 | Pronamide | Pronamide | 23950-58-5 | 0.093 | 1.5 |
| U193 | 1,3-Propane sultone | 1,3-Propane sultone | 1120-71-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U194 | n-Propylamine | n-Propylamine | 107-10-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U196 | Pyridine | Pyridine | 110-86-1 | 0.014 | 16 |
| U197 | p-Benzoquinone | p-Benzoquinone | 106-51-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U200 | Reserpine | Reserpine | 50-55-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| U201 | Resorcinol | Resorcinol | 108-46-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U202 | Saccharin and salts | Saccharin | 81-07-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U203 | Safrole | Safrole | 94-59-7 | 0.081 | 22 |
| U204 | Selenium dioxide | Selenium | 7782-49-2 | 0.82 | 5.7 mg/l TCLP |
| U205 | Selenium sulfide | Selenium | 7782-49-2 | 0.82 | 5.7 mg/l TCLP |
| U206 | Streptozotocin | Streptozotocin | 18883-66-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U207 | 1,2,4,5-Tetrachlorobenzene | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| U208 | 1,1,1,2-Tetrachloroethane | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| U209 | 1,1,2,2-Tetrachloroethane | 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.057 | 6.0 |
| U210 | Tetrachloroethylene | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| U211 | Carbon tetrachloride | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| U213 | Tetrahydrofuran | Tetrahydrofuran | 109-99-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U214 | Thallium (I) acetate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| U215 | Thallium (I) carbonate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| U216 | Thallium (I) chloride | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| U217 | Thallium (I) nitrate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| U218 | Thioacetamide | Thioacetamide | 62-55-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U219 | Thiourea | Thiourea | 62-56-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U220 | Toluene | Toluene | 108-88-3 | 0.080 | 10 |
| U221 | Toluenediamine | Toluenediamine | 25376-45-8 | CARBN; or CMBST | CMBST |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

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| 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 |
| U222 | o-Toluidine hydrochloride | o-Toluidine hydrochloride | 636-21-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U223 | Toluene diisocyanate | Toluene diisocyanate | 26471-62-5 | CARBN; or CMBST | CMBST |
| U225 | Bromoform (Tribromomethane) | Bromoform (Tribromomethane) | 75-25-2 | 0.63 | 15 |
| U226 | 1,1,1-Trichloroethane | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| U227 | 1,1,2-Trichloroethane | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| U228 | Trichloroethylene | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| U234 | 1,3,5-Trinitrobenzene | 1,3,5-Trinitrobenzene | 99-35-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U235 | tris-(2,3-Dibromopropyl)-phosphate | tris-(2,3-Dibromopropyl)-phosphate | 126-72-7 | 0.11 | 0.10 |
| U236 | Trypan Blue | Trypan Blue | 72-57-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U237 | Uracil mustard | Uracil mustard | 66-75-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| U238 | Urethane (Ethyl carbamate) | Urethane (Ethyl carbamate) | 51-79-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U239 | Xylenes | Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| U240 | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 94-75-7 | 0.72 | 10 |
| | 2,4-D (2,4-Dichlorophenoxyacetic acid) salts and esters | | NA | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U243 | Hexachloropropylene | Hexachloropropylene | 1888-71-7 | 0.035 | 30 |
| U244 | Thiram | Thiram | 137-26-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U246 | Cyanogen bromide | Cyanogen bromide | 506-68-3 | CHOXD; WETOX; or CMBST | CHOXD; WETOX; or CMBST |
| U247 | Methoxychlor | Methoxychlor | 72-43-5 | 0.25 | 0.18 |
| U248 | Warfarin, & salts, when present at concentrations of 0.3% or less | Warfarin | 81-81-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| U249 | Zinc phosphide, Zn ₃ P ₂ , when present at concentrations of 10% or less | Zinc Phosphide | 1314-84-7 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| U271 | Benomyl ¹⁰ | Benomyl | 17804-35-2 | 0.056 | 1.4 |
| U278 | Bendiocarb ¹⁰ | Bendiocarb | 22781-23-3 | 0.056 | 1.4 |
| U279 | Carbaryl ¹⁰ | Carbaryl | 63-25-2 | 0.006 | 0.14 |
| U280 | Barban ¹⁰ | Barban | 101-27-9 | 0.056 | 1.4 |
| U328 | o-Toluidine | o-Toluidine | 95-53-4 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN. | CMBST |
| U353 | p-Toluidine | p-Toluidine | 106-49-0 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN | CMBST |
| U359 | 2-Ethoxyethanol | 2-Ethoxyethanol | 110-80-5 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN | CMBST |
| U364 | Bendiocarb phenol ¹⁰ | Bendiocarb phenol | 22961-82-6 | 0.056 | 1.4 |

TREATMENT STANDARDS FOR HAZARDOUS WASTES

[NOTE: NA means not applicable; fb means followed by]

| 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 |
| U367 | Carbofuran phenol ⁴⁰ | Carbofuran phenol | 1563-38-8 | 0.056 | 1.4 |
| U372 | Carbendazim ⁴⁰ | Carbendazim | 10605-21-7 | 0.056 | 1.4 |
| U373 | Propham ⁴⁰ | Propham | 122-42-9 | 0.056 | 1.4 |
| U387 | Prosulfocarb ⁴⁰ | Prosulfocarb | 52888-80-9 | 0.042 | 1.4 |
| U389 | Triallate ⁴⁰ | 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 ⁴⁰ | Triethylamine | 101-44-8 | 0.081 | 1.5 |
| <u>U408</u> | <u>2,4,6-Tribromophenol</u> | <u>2,4,6-Tribromophenol</u> | <u>118-79-6</u> | <u>0.035</u> | <u>7.4</u> |
| U409 | Thiophanate-methyl ⁴⁰ | Thiophanate-methyl | 23564-05-8 | 0.056 | 1.4 |
| U410 | Thiodicarb ⁴⁰ | Thiodicarb | 59669-26-0 | 0.019 | 1.4 |
| U411 | Propoxur ⁴⁰ | Propoxur | 114-26-1 | 0.056 | 1.4 |

FOOTNOTES TO TREATMENT STANDARD TABLE Chapter 13, Section 4(a)

- 1 The waste descriptions provided in this table do not replace waste descriptions in Chapter 2 of these rules and regulations. 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 Chapter 13, Section 4(c) 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 Chapter 10, Section 14 or Chapter 11, Section 16 of these rules and regulations, 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 Chapter 13, Section 4(a)(iv) of these rules and regulations. 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 Chapter 1, Section 1(g)(i)(L) of these rules and regulations, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.
- 8 These wastes, when rendered nonhazardous and then subsequently managed in CWA, or CWA-equivalent systems, are not subject to treatment standards. (See ~~§148.1(d)~~ and Chapter 13, Section 1(a)(iii)(C) and (D)).
- 9 These wastes, when rendered nonhazardous and then subsequently injected in a Class I SDWA well, are not subject to treatment standards. (See §148.1(d)).
- 10 ~~Between August 26, 1996 and August 26, 1997, t~~ 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 Chapter 13, Section 4(c) 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 Chapter 13, Section 4(c) Table 1, for wastewaters.

11 For these wastes, the definition of CMBST is limited to:

(1) Combustion units operating under Chapter 12, Sections 3 through 8, 19 and 20;

(2) Combustion units permitted under Chapter 10, Section 14,
or

(3) Combustion units operating under Chapter 11, Section 16,
which have obtained a determination of equivalent treatment under
Chapter 13, Section 4(c)(ii).

12 Disposal of K175 wastes that have complied with all applicable Chapter 13, Section 4(a) treatment standards must also be macroencapsulated in accordance with Chapter 13, Section 4(f) Table 1 unless the waste is placed in:

(1) A hazardous waste monofill containing only K175 wastes that meet all applicable Chapter 13, Section 4(a) treatment standards; or

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

268.41 (b) TREATMENT STANDARDS EXPRESSED AS CONCENTRATIONS IN WASTE EXTRACT.

268.41(a) (i) For the requirements previously found in Section 4(b) of this Chapter and for treatment standards in Table CCWE--Constituent Concentrations in Waste Extracts, refer to Section 4(a) of this Chapter.

268.42 (c) TREATMENT STANDARDS EXPRESSED AS SPECIFIED TECHNOLOGIES.

[Note: For the requirements previously found in Section 4(c) of this Chapter in Table 2--Technology-Based Standards by RCRA Waste Code, and Table 3--Technology-Based Standards for Specific Radioactive Hazardous Mixed Waste, refer to Section 4(a) of this Chapter.]

268.42(a) (i) ~~The following wastes in Sections 4(c)(i)(A) and (B) of this Chapter and in the Table in Section 4(a) of this Chapter "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 Sections 4(c)(i)(A) and (B) of this Chapter and Table 1, entitled "Technology Codes and Description of Technology-Based Standards" in Section 4(c) of this Chapter.~~

~~268.42(a)(1) (A) Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 ppm but less than 500 ppm must be incinerated in accordance with the technical requirements of 40 CFR part 761.70 or burned in high efficiency boilers in accordance with the technical requirements of 40 CFR part 761.60. Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 500 ppm must be incinerated in accordance with the technical requirements of 40 CFR part 761.70. Thermal treatment under Section 4(c) of this Chapter must~~

also be in compliance with applicable regulations in Chapter 5; Chapters 10; Chapter 11, Section 1 and Sections 4 through 31; and Chapter 12, Sections 1 through 8 of these rules and regulations.

268.42(a)(2) ~~————— (B) Nonliquid hazardous wastes containing halogenated organic compounds (HOCs) in total concentration greater than or equal to 1,000 mg/kg and liquid HOC containing wastes that are prohibited under Section 3(c)(v)(A) of this Chapter must be incinerated in accordance with the requirements of Chapter 10, Section 14 or Chapter 11, Section 16 of these rules and regulations. These treatment standards do not apply where the waste is subject to a Section 4 of this Chapter, treatment standard for specific HOC (such as a hazardous waste chlorinated solvent for which a treatment standard is established under Section 4(a) of this Chapter).~~

268.42(a)(3) ~~————— (C) A mixture consisting of wastewater, the discharge of which is subject to regulation under either Section 402 or Section 307(b) of the Clean Water Act, and de minimis losses of materials from manufacturing operations in which these materials are used as raw materials or are produced as products in the manufacturing process, and that meet the criteria of the D001 ignitable liquids containing greater than 10% total organic constituents (TOC) subcategory, is subject to the DEACT treatment standard described in Table 1, Section 4(c) of this Chapter. For purposes of Section 4(c)(i) of this Chapter, de minimis losses include those from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks from process equipment, storage tanks, or containers; leaks from well maintained pump packings and seals; sample purgings; and relief device discharges.~~

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

| Technology code | Description of technology-based standards |
|-----------------|---|
| ADGAS: | Venting of compressed gases into an absorbing or reacting media (i.e., solid or liquid)-venting can be accomplished through physical release utilizing valves/piping; physical penetration of the container; and/or penetration through detonation. |
| AMLGM: | Amalgamation of liquid, elemental mercury contaminated with radioactive materials utilizing inorganic reagents such as copper, zinc, nickel, gold, and sulfur that result in a nonliquid, semi-solid amalgam and thereby reducing potential emissions of elemental mercury vapors to the air. |
| BIODG: | Biodegradation of organics or non-metallic inorganics (i.e., degradable inorganics that contain the elements of phosphorus, nitrogen, and sulfur) in units operated under either aerobic or anaerobic conditions such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the biodegradation of many organic constituents that cannot be directly analyzed in wastewater residues). |
| CARBN: | Carbon adsorption (granulated or powdered) of non-metallic inorganics, organo-metallics, and/or organic constituents, operated such that a surrogate compound or indicator parameter has not undergone breakthrough (e.g., Total Organic Carbon can often be used as an indicator parameter for the adsorption of many organic constituents that cannot be directly analyzed in wastewater residues). Breakthrough occurs when the carbon has become saturated with the constituent (or indicator parameter) and substantial change in adsorption rate associated with that constituent occurs. |

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| 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 Chapter 10, Section 14; Chapter 11, Section 16 or Chapter 12, Section 8 of these rules and regulations, and in other units operated in accordance with applicable technical operating requirements; and certain non-combustive technologies, such as the Catalytic Extraction Process. |
| DEACT: | Deactivation to remove the hazardous characteristics of a waste due to its ignitability, corrosivity, and/or reactivity. |
| FSUBS: | Fuel substitution in units operated in accordance with applicable technical operating requirements. |
| HLVIT: | Vitrification of high level mixed radioactive wastes in units in compliance with all applicable radioactive protection requirements under control of the Nuclear Regulatory Commission. |
| IMERC: | Incineration of wastes containing organics and mercury in units operated in accordance with the technical operating requirements of Chapter 10, Section 14 and Chapter 11, Section 16 of these rules and regulations. 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 Chapter 10, Section 14 and Chapter 11, Section 16 of these rules and regulations. |
| 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 Chapter 1, Section 1(f)(i) of these rules and regulations. |
| 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. |

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| NLDBR: | No land disposal based on recycling. |
| <u>POLYM:</u> | <u>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.</u> |
| 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 Section 302 of the Clean Air Act) for mercury. All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (e.g., High or Low Mercury Subcategories). |
| RMETL: | Recovery of metals or inorganics utilizing one or more of the following direct physical/removal technologies: (1) Ion exchange; (2) resin or solid (i.e., zeolites) adsorption; (3) reverse osmosis; (4) chelation/solvent extraction; (5) freeze crystallization; (6) ultrafiltration and/or (7) simple precipitation (i.e., crystallization) - Note: This does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies. |
| RORGS: | Recovery of organics utilizing one or more of the following technologies: (1) Distillation; (2) thin film evaporation; (3) steam stripping; (4) carbon adsorption; (5) critical fluid extraction; (6) liquid-liquid extraction; (7) precipitation/crystallization (including freeze crystallization); or (8) chemical phase separation techniques (i.e., addition of acids, bases, demulsifiers, or similar chemicals); - Note: this does not preclude the use of other physical phase separation techniques such as a decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies. |
| RTHRM: | Thermal recovery of metals or inorganics from nonwastewaters in units identified as industrial furnaces according to Chapter 1, Section 1(f)(i) in these rules and regulations under the definition of "industrial furnaces". |

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| RZINC: | Resmelting in high temperature metal recovery units for the purpose of recovery of zinc. |
| STABL: | Stabilization with the following reagents (or waste reagents) or combinations of reagents: (1) Portland cement; or (2) lime/pozzolans (e.g., fly ash and cement kiln dust) - this does not preclude the addition of reagents (e.g., iron salts, silicates, and clays) designed to enhance the set/cure time and/or compressive strength, or to overall reduce the leachability of the metal or inorganic. |
| SSTRP: | Steam stripping of organics from liquid wastes utilizing direct application of steam to the wastes operated such that liquid and vapor flow rates, as well as, temperature and pressure ranges have been optimized, monitored, and maintained. These operating parameters are dependent upon the design parameters of the unit such as, the number of separation stages and the internal column design. Thus, resulting in a condensed extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and an extracted wastewater that must undergo further treatment as specified in the standard. |
| WETOX: | Wet air oxidation performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues). |
| WTRRX: | Controlled reaction with water for highly reactive inorganic or organic chemicals with precautionary controls for protection of workers from potential violent reactions as well as precautionary controls for potential emissions of toxic/ignitable levels of gases released during the reaction. |

[Note 1: When a combination of these technologies (i.e., a treatment train) is specified as a single treatment standard, the order of application is specified in Section 4(a) of this Chapter, Table "Treatment Standards for Hazardous Wastes," 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.]

268.42(b) (ii) Any person may submit an application to the EPA Administrator demonstrating that an alternative treatment method can achieve a measure of performance equivalent to that achieved by methods specified in Sections 4(c)(i), 4(c)(iii), and 4(c)(iv) of this Chapter for wastes or specified in Table 1 of Section 4(f) of this Chapter for hazardous debris. The applicant must submit information demonstrating that his or her 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 EPA Administrator may approve the use of the alternative treatment method if he or she finds that the alternative treatment method provides a measure of performance equivalent to that achieved by methods specified in Sections 4(c)(i), 4(c)(iii), and 4(c)(iv) of this Chapter for wastes or in Table 1 of Section 4(f) of this Chapter for hazardous debris. Any approval must be stated in writing and may contain such provisions and conditions as the EPA Administrator deems appropriate. The person to whom such approval is issued must comply with all limitations contained in such a determination.

268.42(c) (iii) As an alternative to the otherwise applicable Section 4 of this Chapter treatment standards, lab packs are eligible for land disposal provided the following requirements are met:

268.42(c)(1) (A) The lab packs comply with the applicable provisions of Chapter 10, Section 13(q) and Chapter 11, Section 15(q) of these and regulations;

268.42(c)(2) (B) The lab pack does not contain any of the wastes listed in Chapter 13, Appendix D of these rules and regulations.

268.42(c)(3) (C) The lab packs are incinerated in accordance with the requirements of Chapter 10, Section 14 or Chapter 11, Section 16 of these rules and regulations and

268.42(c)(4) (D) 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 Section 4 of this Chapter.

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

268.43 (d) TREATMENT STANDARDS EXPRESSED AS WASTE CONCENTRATIONS.

268.43(a) (i) For the requirements previously found in Section 4(d) of this Chapter and for treatment standards in Table CCW--Constituent Concentrations in Wastes, refer to Section 4(a) of this Chapter.

268.44 (e) VARIANCE FROM A TREATMENT STANDARD.

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

268.44(a)(1) (A) 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

268.44(a)(2) (B) 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) (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) (II) For remediation waste only, treatment to ~~of~~ the specified level or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation.

268.44(b) (ii) Each petition must be submitted in accordance with the
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procedures in Chapter 1, Section 3(a) of these rules and regulations.

268.44(c) (iii) 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.

268.44(d) (iv) After receiving a petition for variance from a treatment standard, the EPA Administrator may request any additional information or samples which he or she 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.

268.44(e) (v) The EPA 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.

268.44(f) (vi) A generator, treatment facility, or disposal facility that is managing a waste covered by a variance from the treatment standards must comply with the waste analysis requirements for restricted wastes found under Section 1(g) of this Chapter.

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

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

268.44(h)(1) (A) 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

268.44(h)(2) (B) 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) (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) (II) For remediation waste only, treatment to the specified level would likely discourage aggressive remediation.

268.44(h)(3) (C) 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) (I) At a minimum, impose alternative land disposal restriction treatment standards that, using a reasonable maximum exposure scenario:
- ...(i)(A) (1.) 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
- ...(i)(B) (2.) 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) (II) Not consider post-land-disposal controls.
- 268.44(h)(4) (D) 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 be land disposed.
- 268.44(h)(5) (~~E~~) Public notice and a reasonable opportunity for public comment must be provided before granting or denying the petition.
- 268.44(i) (ix) Each application for a site-specific variance from a treatment standard must include the information in Chapter 1, Section 3(a)(ii) of these rules and regulations;
- 268.44(j) (x) After receiving an application for a site-specific variance from a treatment standard, the Assistant EPA Administrator, or his or her delegated representative, may request any additional information or samples which may be required to evaluate the application.
- 268.44(k) (xi) 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 Section 1(g) of this Chapter.
- 268.44(l) (xii) During the application review process, the applicant for a site-specific variance must comply with all restrictions on land disposal under this Chapter once the effective date for the waste has been reached.
- 268.44(m) (xiii) 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, the Department 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 Chapter 12, Section 3(a) through (d) of these rules and regulations.
- 268.44(n) (xiv) Reserved.
- 268.44(o) (xv) Reserved. ^
- 268.45 (f) TREATMENT STANDARDS FOR HAZARDOUS DEBRIS.
- 268.45(a) (i) Treatment standards. Hazardous debris must be treated prior to land disposal as follows unless the DEQ determines under Chapter 2, Section 3(c)(vi)(B) of these rules and regulations that the debris is no longer contaminated with hazardous waste or the debris is

treated to the waste-specific treatment standard provided in Section 4(f) of this Chapter for the waste contaminating the debris:

- 268.45(a)(1) (A) General. Hazardous debris must be treated for each "contaminant subject to treatment" defined by Section 4(f)(ii) of this Chapter using the technology or technologies identified in Table 1 of Section 4(f) of this Chapter.
- 268.45(a)(2) (B) Characteristic debris. Hazardous debris that exhibits the characteristic of ignitability, corrosivity, or reactivity identified under Chapter 2, Sections 3(b), 3(c), and 3(d) of these rules and regulations, respectively, must be deactivated by treatment using one of the technologies identified in Table 1 of Section 4(f) of this Chapter.
- 268.45(a)(3) (C) Mixtures of debris types. The treatment standards of Table 1 in Section 4(f) of this Chapter 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.
- 268.45(a)(4) (D) Mixtures of contaminant types. Debris that is contaminated with two or more contaminants subject to treatment identified under Section 4(f)(ii) of this Chapter must be treated for each contaminant using one or more treatment technologies identified in Table 1 of Section 4(f) of this Chapter. If an immobilization technology is used in a treatment train, it must be the last treatment technology used.
- 268.45(a)(5) (E) Waste PCBs. Hazardous debris that is also a waste PCB under 40 CFR part part 761 is subject to the requirements of either 40 CFR part part 761 or the requirements of Section 4(f) of this Chapter, whichever are more stringent.
- 268.45(b) (ii) 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:
- 268.45(b)(1) (A) Toxicity characteristic debris. The contaminants subject to treatment for debris that exhibits the Toxicity Characteristic (TC) by Chapter 2, Section 3(e) of these rules and regulations are those EP constituents for which the debris exhibits the TC toxicity characteristic.
- 268.45(b)(2) (B) Debris contaminated with listed waste. The contaminants subject to treatment for debris that is contaminated with a prohibited listed hazardous waste are those constituents or wastes for which treatment standards are established for the waste under Section 4(a) of this Chapter.
- 268.45(b)(3) (C) Cyanide reactive debris. Hazardous debris that is reactive because of cyanide must be treated for cyanide.
- 268.45(c) (iii) Conditioned exclusion of treated debris. Hazardous debris that has been treated using one of the specified extraction or destruction technologies in Table 1 of Section 4(f) of this Chapter and that does not exhibit a characteristic of hazardous waste identified under Chapter 2, Section 3 of these rules and 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.
- 268.45(d) (iv) Treatment residuals-
- 268.45(d)(1) (A) General requirements. Except as provided by

Sections 4(f)(iv)(B) and 4(f)(iv)(D) of this Chapter:

- ... (i) (I) Residue from the treatment of hazardous debris must be separated from the treated debris using simple physical or mechanical means; and
- ... (ii) (II) Residue from the treatment of hazardous debris is subject to the waste-specific treatment standards provided by Section 4 of this Chapter for the waste contaminating the debris.
- 268.45(d)(2) (B) 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 Section 4(f)(ii) of this Chapter, must be deactivated prior to land disposal and is not subject to the waste-specific treatment standards of Section 4 of this Chapter.
- 268.45(d)(3) (C) Cyanide-reactive debris. Residue from the treatment of debris that is reactive because of cyanide must meet the treatment standards for D003 under Section 4(a) of this Chapter, "Treatment Standards for Hazardous Wastes".
- 268.45(d)(4) (D) Ignitable nonwastewater residue. Ignitable nonwastewater residue containing equal to or greater than 10% total organic carbon is subject to the technology-based standards for D001: Ignitable Liquids based on Chapter 2, Section 3(b)(i)(A) of this Chapter under Section 4(a) of this Chapter specified in the treatment standard for D001: Ignitable Liquids.
- 268.45(d)(5) (E) Residue from spalling. Layers of debris removed by spalling are hazardous debris that remain subject to the treatment standards of Section 4(f) of this Chapter.

*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. |

*Table 1.-Alternative Treatment Standards For Hazardous Debris¹

| Technology description | Performance and/or design and operating standard | Contaminant restrictions ² |
|---|---|--|
| <p>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.</p> | <p>Same as above.</p> | <p>Same as above.</p> |
| <p>d. Vibratory Finishing: Process utilizing scrubbing media, flushing fluid, and oscillating energy such that hazardous contaminants or contaminated debris surface layers are removed.⁴</p> | <p>Same as above.</p> | <p>Same as above.</p> |
| <p>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.</p> | <p>Same as above.</p> | <p>Same as above.</p> |
| <p>2. Chemical Extraction</p> <p>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.</p> | <p>All Debris: Treatment to a clean debris surface³;</p> <p>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 Section 4(c)(ii) of this Chapter;⁸ debris surfaces must be in contact with water solution for at least 15 minutes</p> | <p>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 Section 4(c)(ii) of this Chapter must be obtained.⁸</p> |

*Table 1.-Alternative Treatment Standards For Hazardous Debris¹

| Technology description | Performance and/or design and operating standard | Contaminant restrictions ² |
|---|--|---|
| <p>b. Liquid Phase Solvent Extraction: Removal of hazardous contaminants from debris surfaces and surface pores by applying a nonaqueous liquid or liquid solution which causes the hazardous contaminants to enter the liquid phase and be flushed away from the debris along with the liquid or liquid solution while using appropriate agitation, temperature, and residence time.⁴</p> | <p>Same as above.</p> | <p>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Same as above, except that contaminant must be soluble to at least 5% by weight in the solvent.</p> |
| <p>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</p> | <p>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.</p> | <p>Same as above.</p> |
| <p>3. Thermal Extraction</p> <p>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.</p> | <p>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.</p> | <p>Debris contaminated with a dioxin-listed waste:⁵ Obtain an "Equivalent Technology" approval under Section 4(c)(ii) of this Chapter.⁸</p> |

*Table 1.-Alternative Treatment Standards For Hazardous Debris¹

| Technology description | Performance and/or design and operating standard | Contaminant restrictions ² |
|--|---|---|
| <p>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</p> <p>B. Destruction Technologies:</p> | <p>All Debris: Obtain an "Equivalent Technology" approval under Section 4(c)(ii) of this Chapter; 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.</p> <p>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</p> | <p>All Debris: Metals other than mercury.</p> |
| <p>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.</p> | <p>All Debris: Obtain an "Equivalent Technology" approval under Section 4(c)(ii) of this Chapter;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.</p> <p>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 1.2 cm (½ inch) in one dimension (i.e., thickness limit),⁵ except that this thickness limit may be waived under the "Equivalent Technology" approval</p> | <p>All Debris: Metal contaminants.</p> |

*Table 1.-Alternative Treatment Standards For Hazardous Debris¹

| Technology description | Performance and/or design and operating standard | Contaminant restrictions ² |
|--|---|--|
| <p>2. Chemical Destruction</p> <p>a. Chemical Oxidation: Chemical or electrolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combination of reagents-(1) hypochlorite (e.g., bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permanganates; and/or (9) other oxidizing reagents of equivalent destruction efficiency.⁴ Chemical oxidation specifically includes what is referred to as alkaline chlorination.</p> <p>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</p> | <p>All Debris: Obtain an "Equivalent Technology" approval under Section 4(c)(ii) of this Chapter;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.</p> <p>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 1.2 cm (½ inch) in one dimension (i.e., thickness limit),⁵ except that this thickness limit may be waived under the "Equivalent Technology" approval</p> <p>Same as above.</p> | <p>All Debris: Metal contaminants.</p> <p>Same as above.</p> |

*Table 1.-Alternative Treatment Standards For Hazardous Debris¹

| Technology description | Performance and/or design and operating standard | Contaminant restrictions ² |
|--|---|--|
| <p>3. Thermal Destruction: Treatment in an incinerator operating in accordance with Chapter 10, Section 14 or Chapter 11, Section 16 of these rules and regulations; a boiler or industrial furnace operating in accordance with Section 8 of Chapter 12 of these rules and regulations, or other thermal treatment unit operated in accordance with Chapter 10, Section 23 or Chapter 11, Section 17 of these rules and regulations, but excluding for purposes of these debris treatment standards Thermal Desorption units.</p> | <p>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.</p> | <p>Brick, Concrete, Glass, Metal, Pavement, Rock, Metal: Metals other than mercury, except that there are no metal restrictions for vitrification.</p> <p>Debris contaminated with a dioxin-listed waste.⁶ Obtain an "Equivalent Technology" approval under Section 4(c)(ii) of this Chapter,⁸ except that this requirement does not apply to vitrification.</p> |
| <p>C. Immobilization Technologies:</p> | | |
| <p>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.</p> | <p>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).</p> | <p>None.</p> |
| <p>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</p> | <p>Leachability of the hazardous contaminants must be reduced.</p> | <p>None.</p> |

*Table 1.-Alternative Treatment Standards For Hazardous Debris¹

| Technology description | Performance and/or design and operating standard | Contaminant restrictions ² |
|---|---|---------------------------------------|
| <p>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</p> | <p>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).</p> | <p>None.</p> |

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 W.S. 35-11-503(d) 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 F020, F021, F022, F023, F026, and F027.

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 Section 4(c)(ii) of this Chapter 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.

268.46

(g) ALTERNATIVE TREATMENT STANDARDS BASED ON HTMR.

(i) For the treatment standards previously found in Section 4(g) of this Chapter, refer to Section 4(a) of this Chapter.

268.48

(h) UNIVERSAL TREATMENT STANDARDS.

(i) 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 Chapter 1, Section 1(f)(i) of these rules and regulations, 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.

Chapter 13, Section 4(h)(i) Table UTS -- UNIVERSAL TREATMENT STANDARDS

| 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" |

| 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" |
| Organic constituents | | | |
| A2213 ⁶ | 30558-43-1 | 0.042 | 1.4 |
| Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| Acenaphthylene | 208-96-8 | 0.059 | 3.4 |
| Acetone | 67-64-1 | 0.28 | 160 |
| Acetonitrile | 75-05-8 | 5.6 | 38 |
| Acetophenone | 96-86-2 | 0.01 | 9.7 |
| 2-Acetylaminofluorene | 53-96-3 | 0.059 | 140 |
| Acrolein | 107-02-8 | 0.29 | NA |
| Acrylamide | 79-06-1 | 19 | 23 |
| Acrylonitrile | 107-13-1 | 0.24 | 84 |
| Aldicarb sulfone ⁶ | 1646-88-4 | 0.056 | 0.28 |
| Aldrin | 309-00-2 | 0.021 | 0.066 |
| 4-Aminobiphenyl | 92-67-1 | 0.13 | NA |
| Aniline | 62-53-3 | 0.81 | 14 |
| Anthracene | 120-12-7 | 0.059 | 3.4 |
| Aramite | 140-57-8 | 0.36 | NA |
| Barban ⁶ | 101-27-9 | 0.056 | 1.4 |
| Bendiocarb ⁶ | 22781-23-3 | 0.056 | 1.4 |
| Bendiocarb phenol ⁶ | 22961-82-6 | 0.056 | 1.4 |
| Benomyl ⁶ | 17804-35-2 | 0.056 | 1.4 |
| Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| Benzal chloride | 98-87-3 | 0.055 | 6 |
| Benzene | 71-43-2 | 0.14 | 10 |
| 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 |
| 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 |
| Bromodichloromethane | 75-27-4 | 0.35 | 15 |
| Bromomethane/Methyl bromide | 74-83-9 | 0.11 | 15 |

| 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" |
| 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 |
| Butylate ⁶ | 2008-41-5 | 0.042 | 1.4 |
| 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 |
| 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 |
| Chlorobenzilate | 510-15-6 | 0.1 | 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 |
| bis(2-Chloroethoxy)methane | 111-91-1 | 0.036 | 7.2 |
| bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6 |
| 2-Chloroethyl vinyl ether | 110-75-8 | 0.062 | NA |
| Chloroform | 67-66-3 | 0.046 | 6 |
| 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 |

| 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" |
| 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 |
| o-Dichlorobenzene | 95-50-1 | 0.088 | 6 |
| p-Dichlorobenzene | 106-46-7 | 0.09 | 6 |
| Dichlorodifluoromethane | 75-71-8 | 0.23 | 7.2 |
| 1,1-Dichloroethane | 75-34-3 | 0.059 | 6 |
| 1,2-Dichloroethane | 107-06-2 | 0.21 | 6 |
| 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6 |
| 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 | 0.2 | 28 |
| Diethylene glycol, dicarbamate ^e | 5952-26-1 | 0.056 | 1.4 |
| 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 |
| Dimetilan ^e | 644-64-4 | 0.056 | 1.4 |
| Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| 1,4-Dinitrobenzene | 100-25-4 | 0.32 | 2.3 |
| 4,6-Dinitro-o-cresol | 534-52-1 | 0.28 | 160 |

| 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" |
| 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 | 0.4 | 14 |
| 1,4-Dioxane | 123-91-1 | 12 | 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 | 137-30-4 | 0.028 | 28 |
| Endosulfan I | 959-98-8 | 0.023 | 0.066 |
| Endosulfan II | 33213-65-9 | 0.029 | 0.13 |
| Endosulfan sulfate | 1031-07-8 | 0.029 | 0.13 |
| Endrin | 72-20-8 | 0.0028 | 0.13 |
| Endrin aldehyde | 7421-93-4 | 0.025 | 0.13 |
| EPTC ⁶ | 759-94-4 | 0.042 | 1.4 |
| Ethyl acetate | 141-78-6 | 0.34 | 33 |
| Ethyl benzene | 100-41-4 | 0.057 | 10 |
| Ethyl cyanide/Propanenitrile | 107-12-0 | 0.24 | 360 |
| Ethyl ether | 60-29-7 | 0.12 | 160 |
| Ethyl methacrylate | 97-63-2 | 0.14 | 160 |
| Ethylene oxide | 75-21-8 | 0.12 | NA |
| bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| Famphur | 52-85-7 | 0.017 | 15 |
| Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| Fluorene | 86-73-7 | 0.059 | 3.4 |
| Formetanate hydrochloride ⁶ | 23422-53-9 | 0.056 | 1.4 |
| Formparanate ⁶ | 17702-57-7 | 0.056 | 1.4 |
| Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| <u>1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (1,2,3,4,6,7,8-HpCDD)</u> | <u>35822-46-9</u> | <u>0.000035</u> | <u>0.0025</u> |
| <u>1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF)</u> | <u>67562-39-4</u> | <u>0.000035</u> | <u>0.0025</u> |

| 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" |
| <u>1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF)</u> | <u>55673-89-7</u> | <u>0.000035</u> | <u>0.0025</u> |
| 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 |
| Hexachloropropylene | 1888-71-7 | 0.035 | 30 |
| HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| HxCDFs (All Hexachlorodibenzo-furans) | NA | 0.000063 | 0.001 |
| Indeno (1,2,3-c,d) pyrene | 193-39-5 | 0.0055 | 3.4 |
| Iodomethane | 74-88-4 | 0.19 | 65 |
| Isobutyl alcohol | 78-83-1 | 5.6 | 170 |
| Isodrin | 465-73-6 | 0.021 | 0.066 |
| Isolan ⁶ | 119-38-0 | 0.056 | 1.4 |
| Isosafrole | 120-58-1 | 0.081 | 2.6 |
| Kepone | 143-50-0 | 0.0011 | 0.13 |
| Methacrylonitrile | 126-98-7 | 0.24 | 84 |
| Methanol | 67-56-1 | 5.6 | 0.75 mg/l TCLP |
| Methapyrilene | 91-80-5 | 0.081 | 1.5 |
| Methiocarb ⁶ | 2032-65-7 | 0.056 | 1.4 |
| Methomyl ⁶ | 16752-77-5 | 0.028 | 0.14 |
| Methoxychlor | 72-43-5 | 0.25 | 0.18 |
| 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 |
| 3-Methylcholanthrene | 56-49-5 | 0.0055 | 15 |
| 4,4-Methylene bis(2-chloroaniline) | 101-14-4 | 0.5 | 30 |
| Methylene chloride | 75-09-2 | 0.089 | 30 |
| Metolcarb ⁶ | 1129-41-5 | 0.056 | 1.4 |
| Mexacarbate ⁶ | 315-18-4 | 0.056 | 1.4 |
| Molinate ⁶ | 2212-67-1 | 0.042 | 1.4 |
| Naphthalene | 91-20-3 | 0.059 | 5.6 |
| 2-Naphthylamine | 91-59-8 | 0.52 | NA |
| o-Nitroaniline | 88-74-4 | 0.27 | 14 |

| 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-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 | 0.4 | 28 |
| N-Nitrosodimethylamine | 62-75-9 | 0.4 | 2.3 |
| N-Nitroso-di-n-butylamine | 924-16-3 | 0.4 | 17 |
| N-Nitrosomethylethylamine | 10595-95-6 | 0.4 | 2.3 |
| N-Nitrosomorpholine | 59-89-2 | 0.4 | 2.3 |
| N-Nitrosopiperidine | 100-75-4 | 0.013 | 35 |
| N-Nitrosopyrrolidine | 930-55-2 | 0.013 | 35 |
| <u>1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)</u> | <u>3268-87-9</u> | <u>0.000063</u> | <u>0.005</u> |
| <u>1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF)</u> | <u>39001-02-0</u> | <u>0.000063</u> | <u>0.005</u> |
| Oxamyl ⁶ | 23135-22-0 | 0.056 | 0.28 |
| Parathion | 56-38-2 | 0.014 | 4.6 |
| Total PCBs (sum of all PCB isomers, or all Aroclors) ⁸ | 1336-36-3 | 0.1 | 10 |
| Pebulate ⁶ | 1114-71-2 | 0.042 | 1.4 |
| Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| PeCDFs (All Pentachlorodibenzo-furans) | NA | 0.000035 | 0.001 |
| Pentachloroethane | 76-01-7 | 0.055 | 6 |
| Pentachloronitrobenzene | 82-68-8 | 0.055 | 4.8 |
| Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| Phenacetin | 62-44-2 | 0.081 | 16 |
| Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| Phenol | 108-95-2 | 0.039 | 6.2 |
| o-Phenylenediamine ⁶ | 95-54-5 | 0.056 | 5.6 |
| Phorate | 298-02-2 | 0.021 | 4.6 |
| Phthalic acid | 100-21-0 | 0.055 | 28 |
| Phthalic anhydride | 85-44-9 | 0.055 | 28 |
| Physostigmine ⁶ | 57-47-6 | 0.056 | 1.4 |
| Physostigmine salicylate ⁶ | 57-64-7 | 0.056 | 1.4 |

| 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" |
| 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 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.057 | 6 |
| Tetrachloroethylene | 127-18-4 | 0.056 | 6 |
| 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.03 | 7.4 |
| Thiodicarb ⁶ | 59669-26-0 | 0.019 | 1.4 |
| Thiophanate-methyl ⁶ | 23564-05-8 | 0.056 | 1.4 |
| Tirpate⁶ | 26419-73-8 | 0.056 | 0.28 |
| Toluene | 108-88-3 | 0.08 | 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 |
| 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6 |
| Trichloroethylene | 79-01-6 | 0.054 | 6 |
| Trichloromonofluoromethane | 75-69-4 | 0.02 | 30 |
| 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| 2,4,5-Trichlorophenoxyacetic acid/2,4,5-T | 93-76-5 | 0.72 | 7.9 |
| 1,2,3-Trichloropropane | 96-18-4 | 0.85 | 30 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.057 | 30 |
| Triethylamine ⁶ | 101-44-8 | 0.081 | 1.5 |
| tris-(2,3-Dibromopropyl) phosphate | 126-72-7 | 0.11 | 0.1 |

| 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" |
| Vernolate ⁶ | 1929-77-7 | 0.042 | 1.4 |
| Vinyl chloride | 75-01-4 | 0.27 | 6 |
| Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| INORGANIC CONSTITUENTS | | | |
| Antimony | 7440-36-0 | 1.9 | 2.1 <u>1.15</u> mg/l TCLP |
| Arsenic | 7440-38-2 | 1.4 | 5.0 mg/l TCLP |
| Barium | 7440-39-3 | 1.2 | 7.6 <u>21</u> mg/l TCLP |
| Beryllium | 7440-41-7 | 0.82 | 0.014 <u>1.22</u> mg/l TCLP |
| Cadmium | 7440-43-9 | 0.69 | 0.19 <u>0.11</u> mg/l TCLP |
| Chromium (Total) | 7440-47-3 | 2.77 | 0.86 <u>0.60</u> 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 | 0.37 <u>0.75</u> mg/l TCLP |
| Mercury--Nonwastewater from Retort | 7439-97-6 | NA | 0.20 <u>0.20</u> mg/l TCLP |
| Mercury--All Others | 7439-97-6 | 0.15 | 0.25 mg/l TCLP |
| Nickel | 7440-02-0 | 3.98 | 5.0 <u>11</u> mg/l TCLP |
| Selenium | 7782-49-2 | 0.82 | 0.16 <u>5.7</u> mg/l TCLP |
| Silver | 7440-22-4 | 0.43 | 0.30 <u>0.14</u> mg/l TCLP |
| Sulfide | 18496-25-8 | 14 | NA |
| Thallium | 7440-28-0 | 1.4 | 0.078 <u>0.20</u> mg/l TCLP |
| Vanadium ⁵ | 7440-62-2 | 4.3 | 0.23 <u>1.6</u> mg/l TCLP |
| Zinc ⁵ | 7440-66-6 | 2.61 | 5.3 <u>4.3</u> mg/l TCLP |

Footnotes to Universal Treatment Standards Table:

- (1) CAS means Chemical Abstract Services. When the waste code and/or regulated constituents are described as a combination of a chemical with its salts and/or esters, the CAS number is given for the parent compound only.
- (2) Concentration standards for wastewaters are expressed in mg/l and are based on analysis of composite samples.
- (3) Except for Metals (EP or TCLP) and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of Chapter

10, Section 14 or Chapter 11, Section 16 of these rules and regulations, 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 Section 4(a)(iv) of this Chapter. All concentration standards for nonwastewaters are based on analysis of grab samples.

- (4) Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using Method 9010 or 9012, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as (incorporated by reference in Chapter 1, Section 1(g)(i)(~~KK~~) of these rules and regulations), with a sample size of 10 grams and a distillation time of one hour and 15 minutes
- (5) These constituents are not "underlying hazardous constituents" in characteristic wastes, according to the definition at Chapter 1, Section 1(f)(i) of these rules and regulations.
- (6) Between August 26, 1998 and March 4, 1999, these constituents are not "underlying hazardous constituents" as defined in Chapter 1, Section 1(f)(I)(i) of these rules and regulations.
- (7) ^ Reserved.
- (8) This standard is temporarily deferred for soil exhibiting a hazardous characteristic due to D004-D011 only.

NOTE: NA means not applicable.

(i) **RESERVED.**

268.49 (j) **APPLICABILITY.**

268.49(a) (i) 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:

| <u>If LDRs</u> | <u>And if LDRs</u> | <u>And if</u> | <u>Then you</u> |
|---|---|---|----------------------------------|
| <u>Applied to the listed waste when it contaminated the soil*.</u> | <u>Apply to the listed waste now.</u> | | <u>Must comply with LDRs</u> |
| <u>Didn't apply to the listed waste when it contaminated the soil*.</u> | <u>Apply to the listed waste now.</u> | <u>The soil is determined to contain the listed waste when the soil is first generated.</u> | <u>Must comply with LDRs.</u> |
| <u>Didn't apply to the listed waste when it contaminated the soil*.</u> | <u>Apply to the listed waste now.</u> | <u>The soil is determined not to contain the listed waste when the soil is first generated.</u> | <u>Needn't comply with LDRs.</u> |
| <u>Didn't apply to the listed waste when it contaminated the soil*.</u> | <u>Don't apply to the listed waste now.</u> | | <u>Needn't comply with LDRs.</u> |

* For dates of LDR applicability, see Chapter 13, Appendix G. 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.

268.49(b) (ii) 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] Section 4(j)(iii) of this Chapter or according to the Universal Treatment Standards specified in Section 4(h) of this Chapter 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 Section 4(j)(iii) of this Chapter and the Universal Treatment Standards may be modified through a treatment variance approved in accordance with Section 4(e) of this Chapter.

268.49(c) (iii) Treatment standards for contaminated soils. Prior to land disposal, contaminated soil identified by Section 4(j)(i) of this Chapter as needing to comply with LDRs must be treated according to all the standards specified in Section 4(j)(iii) of this Chapter or according to the Universal Treatment Standards specified in Section 4(h) of this Chapter.

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

268.49(c)(1)(A) (I) For non-metals except carbon disulfide, cyclohexanone, and methanol, treatment must achieve 90 percent reduction in total constituent concentrations, except as provided by Section 4(j)(iii)(A)(III) of this Chapter.

268.49(c)(1)(B) (II) For metals and carbon disulfide, cyclohexanone, and methanol, treatment must achieve 90 percent reduction in constituent concentrations as measured in leachate from the treated media (tested according to the TCLP) or 90 percent reduction in total constituent concentrations (when a metal removal treatment technology is used), except as provided by Section 4(j)(iii)(A)(III) of this Chapter.

268.49(c)(1)(C) (III) When treatment of any constituent subject to treatment to a 90 percent reduction standard would result in a concentration less than 10 times the Universal Treatment Standard for that constituent, treatment to achieve constituent concentrations less than 10 times the universal treatment standard is not required. Universal Treatment Standards are identified in Section 4(i) Table UTS of this Chapter.

268.49(c)(2) (B) Soils that exhibit the characteristic of ignitability, corrosivity or reactivity. In addition to the treatment required by Section 4(j)(iii)(A) of this Chapter, prior to land disposal, soils that exhibit the characteristic of ignitability, corrosivity, or reactivity must be treated to eliminate these characteristics.

268.49(c)(3) (C) Soils that contain nonanalyzable constituents. In addition to the treatment requirements of Sections 4(j)(iii)(A) and (B) of this Chapter, prior to land disposal, the following treatment is required for soils that contain nonanalyzable constituents:

268.49(c)(3)(A) (I) For soil that contains only analyzable and nonanalyzable organic constituents, treatment of the analyzable organic constituents to the levels specified in Sections 4(j)(iii)(A) and (B) of this Chapter; or,

268.49(c)(3)(B) (II) For soil that contains only nonanalyzable constituents, treatment by the method(s) specified in Section 4(c) of this Chapter for the waste contained in the soil.

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

268.49(e) (v) Management of treatment residuals. Treatment residuals from treating contaminated soil identified by Section 4(j)(i) of this Chapter as needing to comply with LDRs must be managed as follows:

268.49(e)(1) (A) Soil residuals are subject to the treatment standards of this Section;

268.49(e)(2) (B) Non-soil residuals are subject to:

268.49(e)(2)(A) (I) For soils contaminated by listed hazardous waste, the hazardous waste management standards applicable to the listed hazardous waste; and

268.49(e)(2)(B) (II) For soils that exhibit a characteristic of hazardous waste, if the non-soil residual also exhibits a characteristic of hazardous waste, the treatment standards applicable to the characteristic hazardous waste.

Subpart E268 Section 5. PROHIBITIONS ON STORAGE

268.50 (a) PROHIBITIONS ON STORAGE OF RESTRICTED WASTES

268.50(a) (i) Except as provided in Section 5(a) of this Chapter, the storage of hazardous wastes restricted from land disposal under Section 3 of this Chapter and W.S. 35-11-503(d) is prohibited, unless the following conditions are met:

268.50(a)(1) (A) 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 Chapter 8, Section 3(e); Chapter 5; Chapter 10; and Chapter 11, Section 1 and Sections 4 through 31 of these rules and regulations.

268.50(a)(2) (B) 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) (I) Each container is clearly marked to identify its contents and the date each period of accumulation begins;

...(ii) (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 Chapter 10, Section 5(d) or Chapter 11, Section 7(d) of these rules and regulations.

- 268.50(a)(3) (C) A transporter stores manifested shipments of such wastes at a transfer facility for 10 days or less.
- 268.50(b) (ii) An owner/operator of a treatment, storage or disposal facility may store such wastes for up to one year unless the DEQ 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.
- 268.50(c) (iii) A owner/operator of a treatment, storage or disposal facility may store such wastes beyond one year; however, the owner/operator bears the burden of proving that such storage was solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal.
- 268.50(d) (iv) If a generator's waste is exempt from a prohibition on the type of land disposal utilized for the waste (for example, because of an approved case-by-case extension under Section 1(e) of this Chapter, an approved Section 1(f) of this Chapter petition, or a national capacity variance under Section 3 of this Chapter), the prohibition in Section (5)(a)(i) of this Chapter does not apply during the period of such exemption.
- 268.50(e) (v) The prohibition in Section (5)(a)(i) of this Chapter does not apply to hazardous wastes that meet the treatment standards specified under Sections 4(b), 4(c), and 4(d) of this Chapter or the treatment standards specified under the variance in Section 4(e) of this Chapter, or, where treatment standards have not been specified, is in compliance with the applicable prohibitions specified in Section 3(c) of this Chapter and W.S. 35-11-503(d).
- 268.50(f) (vi) 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 part 761.65(b) and must be removed from storage and treated or disposed as required by this Chapter within one year of the date when such wastes are first placed into storage. The provisions of Section 5(a)(iii) of this Chapter do not apply to such PCB wastes prohibited under Section 3(c) of this Chapter.
- 268.50(g) (vii) The prohibition and requirements in this do not apply to hazardous remediation wastes stored in a staging pile approved pursuant to Chapter 10, Section 18(c) of these rules and regulations.

Appendix A - ~~Toxicity Characteristic Leaching Procedure (TCLP)~~Reserved

~~[Note: The TCLP (Method 1311) is published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Chapter 1, Section 1(g)(i(L) of these rules and regulations.]~~

Appendix B - ~~Treatment Standards (As Concentrations in the Treatment
Residual Extract)~~Reserved

~~* Note: The treatment standards for F001-F005 Spent Solvent Wastes
appear in Chapter 13, Section 4(a) of these rules and regulations.~~

Appendix C - List of Halogenated Organic Compounds Regulated Under Chapter 13, Section 3(c) of These Rules and Regulations

In determining the concentration of HOCs in a hazardous waste for purposes of the Chapter 13, Section 3(c) of these rules and regulations land disposal prohibition, EPA has defined the HOCs that must be included in the calculation as any compounds having a carbon-halogen bond which are listed in this appendix (see Chapter 1, Section 1(f)(i) of these rules and regulations). Appendix C of this Chapter consists of the following compounds:

I. Volatiles

1. Bromodichloromethane
2. Bromomethane
3. Carbon Tetrachloride
4. Chlorobenzene
5. 2-Chloro-1,3-butadiene
6. Chlorodibromomethane
7. Chloroethane
8. 2-Chloroethyl vinyl ether
9. Chloroform
10. Chloromethane
11. 3-Chloropropene
12. 1,2-Dibromo-3-chloropropane
13. 1,2-Dibromomethane
14. Dibromomethane
15. Trans-1,4-Dichloro-2-butene
16. Dichlorodifluoromethane
17. 1,1-Dichloroethane
18. 1,2-Dichloroethane
19. 1,1-Dichloroethylene
20. Trans-1,2-Dichloroethene
21. 1,2-Dichloropropane
22. Trans-1,3-Dichloropropene
23. cis-1,3-Dichloropropene
24. Iodomethane
25. Methylene chloride
26. 1,1,1,2-Tetrachloroethane
27. 1,1,2,2-Tetrachloroethane
28. Tetrachloroethene
29. Tribromomethane
30. 1,1,1-Trichloroethane
31. 1,1,2-Trichloroethane
32. Trichloroethene
33. Trichloromonofluoromethane
34. 1,2,3-Trichloropropane
35. Vinyl Chloride

II. Semivolatiles

1. Bis(2-chloroethoxy)ethane
2. Bis(2-chloroethyl)ether
3. Bis(2-chloroisopropyl)ether
4. p-Chloroaniline
5. Chlorobenzilate
6. p-Chloro-m-cresol
7. 2-Chloronaphthalene
8. 2-Chlorophenol
9. 3-Chloropropionitrile
10. m-Dichlorobenzene
11. o-Dichlorobenzene
12. p-Dichlorobenzene

13. 3,3'-Dichlorobenzidine
14. 2,4-Dichlorophenol
15. 2,6-Dichlorophenol
16. Hexachlorobenzene
17. Hexachlorobutadiene
18. Hexachlorocyclopentadiene
19. Hexachloroethane
20. Hexachloropropene
21. Hexachlorpropene
22. 4,4'-Methylenebis(2-chloroaniline)
23. Pentachlorobenzene
24. Pentachloroethane
25. Pentachloronitrobenzene
26. Pentachlorophenol
27. Pronamide
28. 1,2,4,5-Tetrachlorobenzene
29. 2,3,4,6-Tetrachlorophenol
30. 1,2,4-Trichlorobenzene
31. 2,4,5-Trichlorophenol
32. 2,4,6-Trichlorophenol
33. Tris(2,3-dibromopropyl)phosphate

III. Organochlorine Pesticides

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

IV. Phenoxyacetic Acid Herbicides

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

V. PCBs

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

VI. Dioxins and Furans

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

Appendix D - Wastes Excluded From Lab Packs Under the Alternative
Treatment Standards of Chapter 13, Section 4(c)(iii)

Hazardous waste with the following EPA Hazardous Waste Codes may not be placed in lab packs under the alternative lab pack treatment standards of Section 4(c)(iii) of this Chapter ~~13-268-42(c)~~: D009, F019, K003, K004, K005, K006, K062, K071, K100, K106, P010, P011, P012, P076, P078, U134, U151.

Appendix E - Organic Lab Packs

Reserved.

Appendix F - Recommended Technologies to Achieve Deactivation of Characteristics in Chapter 13, Section 4(c)

The treatment standard for many characteristic wastes is stated in Section 4(a) of this Chapter of Treatment Standards ~~subcategories of D001, D002, and D003 wastes as well as for K044, K045, and K047 wastes is listed in Chapter 13, Section 4(c) of these rules and regulations simply as "Deactivation and meet UTS." to remove the characteristics of ignitability, corrosivity, and reactivity". EPA-DEQ has determined that many technologies, when used alone or in combination, can achieve the deactivation portion of the treatment~~ ~~this 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 Chapter 1, Section 1(f)(i) of these rules and regulations) 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 these technologies, utilizing the five letter technology codes established in Section 4(c) ~~Table 1 of this Chapter, Chapter 13, Section 4(c) of these rules and regulations 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. ~~these alternative methods are not performed in units designated as land disposal.~~

| Waste code/subcategory | Nonwastewaters | Wastewaters |
|---|--|---|
| D001 Ignitable Liquids based on Chapter 2, Section 3(b)(i)(A) of these rules and regulations -- Low TOC Nonwastewater Subcategory (containing 1% to <10% TOC) | RORGS INCIN WETOX CHOXD BIODG | n.a. |
| D001 Ignitable Liquids based on Chapter 2, Section 3(b)(i)(A) of these rules and regulations -- Ignitable Wastewater Subcategory (containing <1% TOC) | n.a. | RORGS INCIN WETOX CHOXD BIODG |
| D001 Compressed Gases based on Chapter 2, Section 3(b)(i)(C) of these rules and regulations | RCGAS INCIN FSUBS ADGAS fb. INCIN ADGAS fb. (CHOXD; or CHRED) | n.a. |
| D001 Ignitable Reactives based on Chapter 2, Section 3(b)(i)(B) of these rules and regulations | WTRRX CHOXD CHRED STABL INCIN | n.a. |
| D001 Ignitable Oxidizers based on Chapter 2, Section 3(b)(i)(D) of these rules and regulations | CHRED INCIN | CHRED INCIN |

| Waste code/subcategory | Nonwastewaters | Wastewaters |
|---|----------------------------------|---|
| D002 Acid Subcategory based on Chapter 2, Section 3(c)(i)(A) of these rules and regulations with pH less than or equal to 2 | RCORR NEUTR INCIN | NEUTR INCIN |
| D002 Alkaline Subcategory based on Chapter 2, Section 3(c)(i)(A) of these rules and regulations with pH greater than or equal to 12.5 | NEUTR INCIN | NEUTR INCIN |
| D002 Other Corrosives based on Chapter 2, Section 3(b)(i)(B) of these rules and regulations | CHOXD CHRED INCIN STABL | CHOXD CHRED INCIN |
| D003 Water Reactives based on Chapter 2, Sections 3(d)(i)(B), (C), and (D) of these rules and regulations | INCIN WTRRX CHOXD CHRED | n.a. |
| D003 Reactive Sulfides based on Chapter 2, Section 3(d)(i)(E) of these rules and regulations | CHOXD CHRED INCIN STABL | CHOXD CHRED BIODG INCIN |
| D003 Explosives based on Chapter 2, Sections 3(d)(i)(F), (G), and (H) of these rules and regulations | INCIN CHOXD CHRED | INCIN CHOXD CHRED BIODG CARBN |
| D003 Other Reactives based on Chapter 2, Section 3(d)(i)(A) of these rules and regulations | INCIN CHOXD CHRED | INCIN CHOXD CHRED BIODG CARBN |
| K044 Wastewater treatment sludges from the manufacturing and processing of explosives | CHOXD CHRED INCIN | CHOXD CHRED BIODG CARBN INCIN |
| K045 Spent carbon from the treatment of wastewaters containing explosives | CHOXD CHRED INCIN | CHOXD CHRED BIODG CARBN INCIN |
| K047 Pink/red water from TNT operations | CHOXD CHRED INCIN | CHOXD CHRED BIODG CARBN INCIN |

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

Appendix G -- 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 |
|--|---|--|
| California list | Liquid hazardous wastes, including free liquids associated with solid or sludge, containing free cyanides at concentrations greater than or equal to 1,000 mg/l or certain metals or compounds of these metals greater than or equal to the prohibition levels | July 8, 1987. |
| California list | Liquid (aqueous) hazardous wastes having a pH less than or equal to 2 | July 8, 1987. |
| California list | Dilute HOC wastewaters, defined as HOC waste mixtures that are primarily water and that contain greater than or equal to 1,000 mg /l but less than 10,000 mg/l | July 8, 1987. |
| California list | Liquid hazardous waste containing PCBs greater than or equal to 50 ppm | July 8, 1987. |
| California list | Other liquid and nonliquid hazardous wastes containing HOCs in total concentration greater than or equal to 1,000 mg | Nov. 8, 1988. |
| D001 ^c | All <u>(except High TOC Ignitable Liquids)</u> | Aug. 8, 1990. <u>Aug. 9, 1993</u> |
| <u>D001</u> | <u>High TOC Ignitable Liquids</u> | <u>Aug. 8, 1990.</u> |
| D002 ^c | All | Aug. 8, 1990. <u>Aug. 9, 1993.</u> |
| D003 ^c | All | Aug. 8, 1990. <u>July 8, 1996.</u> |
| D004 | Wastewater | Aug. 8, 1990. |
| D004 | Nonwastewater | May 8, 1992. |
| D005 | All | Aug. 8, 1990. |
| D006 | All | Aug. 8, 1990. |
| D007 | All | Aug. 8, 1990. |
| D008 | Lead materials before secondary smelting | May 8, 1992. |
| D008 | All others | Aug. 8, 1990. |
| D009 | Nonwastewater | May 8, 1992. |
| D009 | All others | Aug. 8, 1990. |
| D010 | All | Aug. 8, 1990. |
| D011 | All | Aug. 8, 1990. |
| <u>D012 (that exhibit the toxicity characteristic based on the TCLP)^d</u> | All | Aug. 8, 1990. <u>Dec. 14, 1994</u> |
| <u>D013 (that exhibit the toxicity characteristic based on the TCLP)^d</u> | All | Aug. 8, 1990. <u>Dec. 14, 1994</u> |

| Waste code | Waste category | Effective date |
|--|--------------------------------------|---|
| <u>D014 (that exhibit the toxicity characteristic based on the TCLP)^d</u> | All | Aug. 8, 1990. Dec. 14, 1994 |
| <u>D015 (that exhibit the toxicity characteristic based on the TCLP)^d</u> | All | Aug. 8, 1990. Dec. 14, 1994 |
| <u>D016 (that exhibit the toxicity characteristic based on the TCLP)^d</u> | All | Aug. 8, 1990. Dec. 14, 1994 |
| <u>D017 (that exhibit the toxicity characteristic based on the TCLP)^d</u> | All | Aug. 8, 1990. Dec. 14, 1994 |
| <u>D018</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D018</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D019</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D019</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D020</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D020</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D021</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D021</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D022</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D022</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D023</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D023</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D024</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D024</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D025</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D025</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D026</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D026</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D027</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D027</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D028</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D028</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D029</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D029</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D030</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D030</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D031</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D031</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D032</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D032</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D033</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D033</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D034</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D034</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D035</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D035</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D036</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| <u>D036</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>D037</u> | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |

| Waste code | Waste category | Effective date |
|--|--|------------------------|
| D037 | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| D038 | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| D038 | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| D039 | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| D039 | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| D040 | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| D040 | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| D041 | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| D041 | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| D042 | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| D042 | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| D043 | <u>Mixed with radioactive wastes</u> | <u>Sept. 19, 1996.</u> |
| D043 | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| F001 | Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids | Nov. 8, 1988. |
| F001 | All others | Nov. 8, 1986. |
| F002 (1,1,2- trichloro-ethane) | Wastewater and Nonwastewater | Aug. 8, 1990. |
| F002 | Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids | Nov. 8, 1988. |
| F002 | All others | Nov. 8, 1986. |
| F003 | Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids | Nov. 8, 1988. |
| F003 | All others | Nov. 8, 1986. |
| F004 | Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids | Nov. 8, 1988. |
| 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. |

| Waste code | Waste category | Effective date |
|------------------------------|---|--------------------------|
| 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. |
| F022 | All | Nov. 8, 1988. |
| F023 | All | Nov. 8, 1988. |
| F024 (metals) | Wastewater | June 8, 1989. |
| F024 (metals) | Nonwastewater | Aug. 8, 1990. |
| F024^b | All others | June 8, 1989. |
| F025 | All | Aug. 8, 1990. |
| F026 | All | Nov. 8, 1988. |
| F027 | All | Nov. 8, 1988. |
| F028 | All | Nov. 8, 1988. |
| <u>F032</u> | <u>Mixed with radioactive wastes</u> | <u>May 12, 1999</u> |
| <u>F032</u> | <u>All others</u> | <u>May 12, 1997</u> |
| <u>F033</u> | <u>Mixed with radioactive wastes</u> | <u>May 12, 1999</u> |
| <u>F033</u> | <u>All others</u> | <u>May 12, 1997</u> |
| <u>F034</u> | <u>Mixed with radioactive wastes</u> | <u>May 12, 1999</u> |
| <u>F034</u> | <u>All others</u> | <u>May 12, 1997</u> |
| <u>F037</u> | <u>Not generated from surface impoundment cleanouts or closures</u> | <u>June 30, 1993.</u> |
| <u>F037</u> | <u>Generated from surface impoundment cleanouts or closures</u> | <u>June 30, 1994.</u> |
| <u>F037</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>F038</u> | <u>Not generated from surface impoundment cleanouts or closures</u> | <u>June 30, 1993.</u> |
| 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 ^e | Nonwastewater | Aug. 8, 1988. |
| K005 | Wastewater | Aug. 8, 1990. |
| K005 ^e | Nonwastewater | June 8, 1989. |
| K006 | All | Aug. 8, 1990. |
| K007 | Wastewater | Aug. 8, 1990. |
| K007 ^e | Nonwastewater | June 8, 1989. |
| K008 | Wastewater | Aug. 8, 1990. |
| K008 ^e | Nonwastewater | Aug. 8, 1988. |
| K009 | All | June 8, 1989. |
| K010 | All | June 8, 1989. |

| Waste code | Waste category | Effective date |
|-------------------|----------------|----------------|
| K011 | Wastewater | Aug. 8, 1990. |
| K011 | Nonwastewater | June 8, 1989. |
| K013 | Wastewater | Aug. 8, 1990. |
| K013 | Nonwastewater | June 8, 1989. |
| K014 | Wastewater | Aug. 8, 1990. |
| K014 | Nonwastewater | June 8, 1989. |
| K015 | Wastewater | Aug. 8, 1988. |
| K015 | Nonwastewater | Aug. 8, 1990. |
| K016 | All | Aug. 8, 1988. |
| K017 | All | Aug. 8, 1990. |
| K018 | All | Aug. 8, 1988. |
| K019 | All | Aug. 8, 1988. |
| K020 | All | Aug. 8, 1988. |
| K021 | Wastewater | Aug. 8, 1990. |
| K021 ^e | 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 ^e | 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 ^e | Nonwastewater | Aug. 8, 1988. |
| K037 ^b | Wastewater | Aug. 8, 1988. |
| K037 | Nonwastewater | Aug. 8, 1988. |
| K038 | All | June 8, 1989. |
| K039 | All | June 8, 1989. |

| Waste code | Waste category | Effective date |
|--|-------------------------------------|---|
| K040 | All | June 8, 1989. |
| K041 | All | Aug. 8, 1990. |
| K042 | All | Aug. 8, 1990. |
| K043 | All | June 8, 1989. |
| K044 ^e | All | Aug. 8, 1988. |
| K045 ^e | All | Aug. 8, 1988. |
| K046 (Nonreactive) | Nonwastewater | Aug. 8, 1988. |
| K046 | All others | Aug. 8, 1990. |
| K047 ^c | 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 ^c | Nonwastewater | Aug. 8, 1988. |
| K061 | Wastewater | Aug. 8, 1990. |
| K061 (low zinc) (interim standard for high zinc remains in effect until August 7, 1991). | Nonwastewater | Aug. 8, 1988. <u>June 30, 1992.</u> |
| K062 | All | Aug. 8, 1988. |
| K069 (Non-Calcium Sulfate) ^e | 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. |
| <u>K088</u> | <u>Mixed with radioactive waste</u> | <u>April 8, 1998.</u> |
| <u>K088</u> | <u>All others</u> | <u>Jan. 8, 1997.</u> |

| Waste code | Waste category | Effective date |
|-------------------|--------------------------------------|-----------------------|
| 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 ^e | Nonwastewater | Aug. 8, 1988. |
| K101 (organics) | Wastewater | Aug. 8, 1988. |
| K101 (metals) | Wastewater | Aug. 8, 1990. |
| K101 (organics) | Nonwastewater | Aug. 8, 1988. |
| K101 (metals) | Nonwastewater | May 8, 1992. |
| K102 (organics) | Wastewater | Aug. 8, 1988. |
| K102 (metals) | Wastewater | Aug. 8, 1990. |
| K102 (organics) | Nonwastewater | Aug. 8, 1988. |
| K102 (metals) | Nonwastewater | May 8, 1992. |
| K103 | All | Aug. 8, 1988. |
| K104 | All | Aug. 8, 1988. |
| K105 | All | Aug. 8, 1990. |
| K106 | Wastewater | Aug. 8, 1990. |
| K106 | Nonwastewater | May 8, 1992. |
| <u>K107</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>K107</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>K108</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>K108</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>K109</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>K109</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>K110</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>K110</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>K111</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>K111</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>K112</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>K112</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| K113 | All | June 8, 1989. |
| K114 | All | June 8, 1989. |
| K115 | All | June 8, 1989. |
| K116 | All | June 8, 1989. |

| Waste code | Waste category | Effective date |
|-------------|--------------------------------------|-----------------------|
| <u>K117</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>K117</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>K118</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>K118</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>K123</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>K123</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>K124</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>K124</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>K125</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>K125</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>K126</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>K126</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>K131</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>K131</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>K132</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>K132</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>K136</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>K136</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>K141</u> | <u>Mixed with radioactive wastes</u> | <u>Sep. 19, 1996.</u> |
| <u>K141</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>K142</u> | <u>Mixed with radioactive wastes</u> | <u>Sep. 19, 1996.</u> |
| <u>K142</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>K143</u> | <u>Mixed with radioactive wastes</u> | <u>Sep. 19, 1996.</u> |
| <u>K143</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>K144</u> | <u>Mixed with radioactive wastes</u> | <u>Sep. 19, 1996.</u> |
| <u>K144</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>K145</u> | <u>Mixed with radioactive wastes</u> | <u>Sep. 19, 1996.</u> |
| <u>K145</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>K147</u> | <u>Mixed with radioactive wastes</u> | <u>Sep. 19, 1996.</u> |
| <u>K147</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>K148</u> | <u>Mixed with radioactive wastes</u> | <u>Sep. 19, 1996.</u> |
| <u>K148</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>K149</u> | <u>Mixed with radioactive wastes</u> | <u>Sep. 19, 1996.</u> |
| <u>K149</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>K150</u> | <u>Mixed with radioactive wastes</u> | <u>Sep. 19, 1996.</u> |
| <u>K150</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>K151</u> | <u>Mixed with radioactive wastes</u> | <u>Sep. 19, 1996.</u> |
| <u>K151</u> | <u>All others</u> | <u>Dec. 19, 1994.</u> |
| <u>K156</u> | <u>Mixed with radioactive wastes</u> | <u>April 8, 1998.</u> |
| <u>K156</u> | <u>All others</u> | <u>July 8, 1996.</u> |

| Waste code | Waste category | Effective date |
|---------------|--------------------------------------|-----------------------|
| <u>K157</u> | <u>Mixed with radioactive wastes</u> | <u>April 8, 1998.</u> |
| <u>K157</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>K158</u> | <u>Mixed with radioactive wastes</u> | <u>April 8, 1998.</u> |
| <u>K158</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>K159</u> | <u>Mixed with radioactive wastes</u> | <u>April 8, 1998.</u> |
| <u>K159</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>K160</u> | <u>Mixed with radioactive wastes</u> | <u>April 8, 1998.</u> |
| <u>K160</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>K161</u> | <u>Mixed with radioactive wastes</u> | <u>April 8, 1998.</u> |
| <u>K161</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| P001 | All | Aug. 8, 1990. |
| P002 | All | Aug. 8, 1990. |
| P003 | All | Aug. 8, 1990. |
| P004 | All | Aug. 8, 1990. |
| P005 | All | Aug. 8, 1990. |
| P006 | All | Aug. 8, 1990. |
| P007 | All | Aug. 8, 1990. |
| P008 | All | Aug. 8, 1990. |
| P009 | All | Aug. 8, 1990. |
| P010 | Wastewater | Aug. 8, 1990. |
| P010 | Nonwastewater | May 8, 1992. |
| P011 | Wastewater | Aug. 8, 1990. |
| P011 | Nonwastewater | May 8, 1992. |
| P012 | Wastewater | Aug. 8, 1990. |
| P012 | Nonwastewater | May 8, 1992. |
| P013 (barium) | Nonwastewater | Aug. 8, 1990. |
| P013 | All others | June 8, 1989. |
| P014 | All | Aug. 8, 1990. |
| P015 | All | Aug. 8, 1990. |
| P016 | All | Aug. 8, 1990. |
| P017 | All | Aug. 8, 1990. |
| P018 | All | Aug. 8, 1990. |
| P020 | All | Aug. 8, 1990. |
| P021 | All | June 8, 1989. |
| P022 | All | Aug. 8, 1990. |
| P023 | All | Aug. 8, 1990. |
| P024 | All | Aug. 8, 1990. |
| P026 | All | Aug. 8, 1990. |
| P027 | All | Aug. 8, 1990. |
| P028 | All | Aug. 8, 1990. |

| Waste code | Waste category | Effective date |
|------------|----------------|----------------|
| 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. |

| Waste code | Waste category | Effective date |
|---------------|----------------|----------------|
| 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. |

| Waste code | Waste category | Effective date |
|-------------|--------------------------------------|----------------------|
| 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. |
| <u>P127</u> | <u>Mixed with radioactive waste</u> | <u>Apr. 8, 1998.</u> |
| <u>P127</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P128</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P128</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P185</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P185</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P188</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P188</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P189</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P189</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P190</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P190</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P191</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P191</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P192</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P192</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P194</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P194</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P196</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P196</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P197</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P197</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P198</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P198</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P199</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P199</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P201</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P201</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P202</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P202</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P203</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P203</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P204</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P204</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>P205</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>P205</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| 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. |

| Waste code | Waste category | Effective date |
|------------|----------------|----------------|
| 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. |

| Waste code | Waste category | Effective date |
|------------|----------------|----------------|
| U048 | All | Aug. 8, 1990. |
| U049 | All | Aug. 8, 1990. |
| U050 | All | Aug. 8, 1990. |
| U051 | All | Aug. 8, 1990. |
| U052 | All | Aug. 8, 1990. |
| U053 | All | Aug. 8, 1990. |
| U055 | All | Aug. 8, 1990. |
| U056 | All | Aug. 8, 1990. |
| U057 | All | Aug. 8, 1990. |
| U058 | All | June 8, 1989. |
| U059 | All | Aug. 8, 1990. |
| U060 | All | Aug. 8, 1990. |
| U061 | All | Aug. 8, 1990. |
| U062 | All | Aug. 8, 1990. |
| U063 | All | Aug. 8, 1990. |
| U064 | All | Aug. 8, 1990. |
| U066 | All | Aug. 8, 1990. |
| U067 | All | Aug. 8, 1990. |
| U068 | All | Aug. 8, 1990. |
| U069 | All | June 8, 1989. |
| U070 | All | Aug. 8, 1990. |
| U071 | All | Aug. 8, 1990. |
| U072 | All | Aug. 8, 1990. |
| U073 | All | Aug. 8, 1990. |
| U074 | All | Aug. 8, 1990. |
| U075 | All | Aug. 8, 1990. |
| U076 | All | Aug. 8, 1990. |
| U077 | All | Aug. 8, 1990. |
| U078 | All | Aug. 8, 1990. |
| U079 | All | Aug. 8, 1990. |
| U080 | All | Aug. 8, 1990. |
| U081 | All | Aug. 8, 1990. |
| U082 | All | Aug. 8, 1990. |
| U083 | All | Aug. 8, 1990. |
| U084 | All | Aug. 8, 1990. |
| 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. |

| Waste code | Waste category | Effective date |
|------------|----------------|----------------|
| 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. |

| Waste code | Waste category | Effective date |
|------------|----------------|----------------|
| 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. |

| Waste code | Waste category | Effective date |
|------------|----------------|----------------|
| 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 | Aug. 8, 1990. |
| 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. |

| Waste code | Waste category | Effective date |
|-------------|--------------------------------------|-----------------------|
| 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. |
| <u>U271</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U271</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U277</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U277</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U278</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U278</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U279</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U279</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U280</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U280</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U328</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>U328</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>U353</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>U353</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>U359</u> | <u>Mixed with radioactive wastes</u> | <u>June 30, 1994.</u> |
| <u>U359</u> | <u>All others</u> | <u>Nov. 9, 1992.</u> |
| <u>U364</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U364</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U365</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |

| Waste code | Waste category | Effective date |
|-------------|--------------------------------------|----------------------|
| <u>U365</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U366</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U366</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U367</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U367</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U372</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U372</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U373</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U373</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U375</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U375</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U376</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U376</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U377</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U377</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U378</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U378</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U379</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U379</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U381</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U381</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U382</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U382</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U383</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U383</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U384</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U384</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U385</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U385</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U386</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U386</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U387</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U387</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U389</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U389</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U390</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U390</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U391</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U391</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U392</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U392</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U393</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U393</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U394</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U394</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U395</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U395</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U396</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U396</u> | <u>All others</u> | <u>July 8, 1996.</u> |

| Waste code | Waste category | Effective date |
|-------------|--------------------------------------|----------------------|
| <u>U400</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U400</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U401</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U401</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U402</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U402</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U403</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U403</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U404</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U404</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U407</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U407</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U409</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U409</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U410</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U410</u> | <u>All others</u> | <u>July 8, 1996.</u> |
| <u>U411</u> | <u>Mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>U411</u> | <u>All others</u> | <u>July 8, 1996.</u> |

~~FOOTNOTE:~~ ^aThis table does not include mixed radioactive wastes (from the First, Second, and Third Third rules) which ~~are~~ are ~~receiving~~ are a national capacity variance until May 8, 1992, ~~for all applicable treatment technologies.~~ This table also does not include contaminated soil and debris wastes.

~~FOOTNOTE:~~ ^bThe standard ~~has been~~ was revised in the Third ~~Third~~ Final Rule (55 FR 22520, June 1, 1990).

~~FOOTNOTE:~~ ^c~~No land disposal standard has been revised in the Third Third Final Rule.~~

^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, 1990. |
| 2. Soil and debris not from CERCLA response or RCRA corrective actions contaminated with less than 1% total solvents (F001-F005) or dioxins (F020-F023 and F026-F028). | Nov. 8, 1988. |

| Restricted hazardous waste in CSD | Effective date |
|---|--|
| 3. <u>All soil and debris contaminated with California list HOCs from CERCLA response or RCRA corrective actions. First Third wastes for which treatment standards are based on incineration.</u> | Nov. 8, 1990. |
| 4. <u>All soil and debris contaminated with California list HOCs not from CERCLA response or RCRA corrective actions. Second Third wastes for which treatment standards are based on incineration.</u> | July 8, 1989. June 8, 1991. |
| 5. <u>All soil and debris contaminated with First Third wastes for which treatment standards are based on incineration. 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.</u> | Aug. 8, 1990. May 8, 1992. |
| 6. <u>All soil and debris contaminated with Second Third wastes for which treatment standards are based on incineration. D012-D043, K141-K145, and K147-151 wastes.</u> | June 8, 1991. Dec. 19, 1994. |
| 7. <u>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. Debris (only) contaminated with F037, F038, K107-K112, K117, K118, K123-K126, K131, K132, K136, U328, U353, U359.</u> | May 8, 1992. Dec. 19, 1994 |
| 8. <u>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</u> | July 8, 1996. |
| 9. <u>Soil and debris contaminated with K088 wastes</u> | Oct. 8, 1997. |
| 10. <u>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.</u> | April 8, 1998. |
| 11. <u>Soil and debris contaminated with F032, F034, and F035.</u> | May 12, 1997. |

| Restricted hazardous waste in CSD | Effective date |
|--|-----------------------|
| 12. <u>Soil and debris contaminated with newly identified D004-D011 toxicity characteristic wastes and mineral processing wastes.</u> | <u>Aug. 24, 1998.</u> |
| 13. <u>Soil and debris contaminated with mixed radioactive newly identified D004-D011 characteristic wastes and mineral processing wastes.</u> | <u>May 26, 2000.</u> |

[Note: 1. Appendix G [~~Appendix VII~~] is provided for the convenience of the reader.]

~~2. Contaminated Soil and Debris Rule will be promulgated in the future.~~

Appendix H - LDR Effective Dates of Injected Prohibited Hazardous 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 (<1%) total F001-F005 solvent constituents. | Aug. 8, 1990. |
| California list | Liquid hazardous wastes, including free liquids associated with any solid or sludge, containing free cyanides at concentrations greater than or equal to 1,000 mg/l, or containing certain metals or compounds of these metals greater than or equal to the prohibition levels | Aug. 8, 1990. |
| California list | Liquid hazardous waste having a pH less than or equal to 2 | Aug. 8, 1990. |
| California list | Hazardous wastes containing HOCs in total concentrations less than 10,000 mg/l but greater than or equal to 1,000 mg/l | 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. |
| <u>D002^c</u> | <u>All</u> | <u>Feb. 10, 1994.</u> |
| 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. |
| <u>D012</u> | <u>All</u> | <u>Sept. 19, 1995.</u> |
| <u>D013</u> | <u>All</u> | <u>Sept. 19, 1995.</u> |
| <u>D014</u> | <u>All</u> | <u>Sept. 19, 1995.</u> |
| <u>D015</u> | <u>All</u> | <u>Sept. 19, 1995.</u> |
| <u>D016</u> | <u>All</u> | <u>Sept. 19, 1995.</u> |
| <u>D017</u> | <u>All</u> | <u>Sept. 19, 1995.</u> |

| Waste code | Waste category | Effective date |
|-------------|---|----------------------|
| <u>D018</u> | <u>All, including mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D019</u> | <u>All, including mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D020</u> | <u>All, including mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D021</u> | <u>All, including mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D022</u> | <u>All, including mixed with radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D023</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D024</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D025</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D026</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D027</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D028</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D029</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D030</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D031</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D032</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D033</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D034</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D035</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D036</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D037</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D038</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D039</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D040</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D041</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |

| Waste code | Waste category | Effective date |
|---------------|--|-----------------------|
| <u>D042</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| <u>D043</u> | <u>All, including mixed radioactive wastes</u> | <u>Apr. 8, 1998.</u> |
| F007 | All | June 8, 1991. |
| <u>F032</u> | <u>All, including mixed radioactive wastes</u> | <u>May 12, 1999.</u> |
| <u>F034</u> | <u>All, including mixed radioactive wastes</u> | <u>May 12, 1999.</u> |
| <u>F035</u> | <u>All, including mixed radioactive wastes</u> | <u>May 12, 1999.</u> |
| <u>F037</u> | <u>All</u> | <u>Nov. 8, 1992.</u> |
| <u>F038</u> | <u>All</u> | <u>Nov. 8, 1992.</u> |
| F039 | Wastewater | May 8, 1992. |
| K009 | Wastewater | June 8, 1991. |
| K011 | Nonwastewater | June 8, 1991. |
| K011 | Wastewater | May 8, 1992. |
| K013 | Nonwastewater | June 8, 1991. |
| K013 | Wastewater | May 8, 1992. |
| K014 | All | May 8, 1992. |
| K016 (dilute) | All | June 8, 1991. |
| K049 | All | Aug. 8, 1990. |
| K050 | All | Aug. 8, 1990. |
| K051 | All | Aug. 8, 1990. |
| K052 | All | Aug. 8, 1990. |
| K062 | All | Aug. 8, 1990. |
| K071 | All | Aug. 8, 1990. |
| <u>K088</u> | <u>All</u> | <u>Jan. 8, 1997.</u> |
| K104 | All | Aug. 8, 1990. |
| <u>K107</u> | <u>All</u> | <u>Nov. 8, 1992.</u> |
| <u>K108</u> | <u>All</u> | <u>Nov. 9, 1992.</u> |
| <u>K109</u> | <u>All</u> | <u>Nov. 9, 1992.</u> |
| <u>K110</u> | <u>All</u> | <u>Nov. 9, 1992.</u> |
| <u>K111</u> | <u>All</u> | <u>Nov. 9, 1992.</u> |
| <u>K112</u> | <u>All</u> | <u>Nov. 9, 1992.</u> |
| <u>K117</u> | <u>All</u> | <u>June 30, 1995.</u> |
| <u>K118</u> | <u>All</u> | <u>June 30, 1995.</u> |
| <u>K123</u> | <u>All</u> | <u>Nov. 9, 1992.</u> |
| <u>K124</u> | <u>All</u> | <u>Nov. 9, 1992.</u> |

| Waste code | Waste category | Effective date |
|-------------|----------------|-----------------------|
| <u>K125</u> | <u>All</u> | <u>Nov. 9, 1992.</u> |
| <u>K126</u> | <u>All</u> | <u>Nov. 9, 1992.</u> |
| <u>K131</u> | <u>All</u> | <u>June 30, 1995.</u> |
| <u>K132</u> | <u>All</u> | <u>June 30, 1995.</u> |
| <u>K136</u> | <u>All</u> | <u>Nov. 9, 1992.</u> |
| <u>K141</u> | <u>All</u> | <u>Dec. 19, 1994.</u> |
| <u>K142</u> | <u>All</u> | <u>Dec. 19, 1994.</u> |
| <u>K143</u> | <u>All</u> | <u>Dec. 19, 1994.</u> |
| <u>K144</u> | <u>All</u> | <u>Dec. 19, 1994.</u> |
| <u>K145</u> | <u>All</u> | <u>Dec. 19, 1994.</u> |
| <u>K147</u> | <u>All</u> | <u>Dec. 19, 1994.</u> |
| <u>K148</u> | <u>All</u> | <u>Dec. 19, 1994.</u> |
| <u>K149</u> | <u>All</u> | <u>Dec. 19, 1994.</u> |
| <u>K150</u> | <u>All</u> | <u>Dec. 19, 1994.</u> |
| <u>K151</u> | <u>All</u> | <u>Dec. 19, 1994.</u> |
| <u>K156</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>K157</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>K158</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>K159</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>K160</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>K161</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P127</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P128</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P185</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P188</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P189</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P190</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P191</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P192</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P194</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P196</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P197</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P198</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P199</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P201</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P202</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P203</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P204</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>P205</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U271</u> | <u>All</u> | <u>July 8, 1996.</u> |

| Waste code | Waste category | Effective date |
|-------------|----------------|----------------------|
| <u>U277</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U278</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U279</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U280</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U328</u> | <u>All</u> | <u>Nov. 9, 1992.</u> |
| <u>U353</u> | <u>All</u> | <u>Nov. 9, 1992.</u> |
| <u>U359</u> | <u>All</u> | <u>Nov. 9, 1992.</u> |
| <u>U364</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U365</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U366</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U367</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U372</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U373</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U375</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U376</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U377</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U378</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U379</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U381</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U382</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U383</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U384</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U385</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U386</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U387</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U389</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U390</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U391</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U392</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U395</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U396</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U400</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U401</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U402</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U403</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U404</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U407</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U409</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U410</u> | <u>All</u> | <u>July 8, 1996.</u> |
| <u>U411</u> | <u>All</u> | <u>July 8, 1996.</u> |

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

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

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

[Note: This table is provided for the convenience of the reader.]

Appendix I - 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 Chapter 1, Section 1(g)(i)(L) of
these rules and regulations.]

Appendix J -- Reserved

TABLE 1. RECORDKEEPING, NOTIFICATION, AND/OR CERTIFICATION REQUIREMENTS

| Entity | | Scenario | | Frequency | Recipient of Notification | Recordkeeping, Notification, and/or Certification Requirements |
|--------|--------------------|----------|---|---------------|-------------------------------|---|
| I. | Generator | A. | Waste does not meet applicable treatment standards or exceeds applicable prohibition levels [Chapter 13, Section 1(g)(i)(A)]. | Each shipment | Treatment or storage facility | <p>Notice must include:</p> <ul style="list-style-type: none"> • EPA hazardous waste number • Constituents of concern • Treatability group • Manifest number • Waste analysis data (where available) |
| | Generator (cont'd) | B. | Waste can be disposed of without further treatment (meets applicable treatment standards or does not exceed prohibition levels upon generation) [Chapter 13, Section 1(g)(i)(B)]. | Each shipment | Land disposal facility | <p>Notice and certification statement that waste meets applicable treatment standards or applicable prohibition levels:</p> <p>Notice must include:</p> <ul style="list-style-type: none"> • EPA hazardous waste number • Constituents of concern • Treatability group • Manifest number • Waste analysis data (where available) <p>Certification statement required under Chapter 13, Section 1(g)(i)(B)(II) that waste complies with treatment standards and prohibitions.</p> |

| Entity | | Scenario | Frequency | Recipient of Notification | Recordkeeping, Notification, and/or Certification Requirements |
|--------|--------------------|---|--|--|---|
| | Generator (cont'd) | C. Waste is subject to exemption from a prohibition on the type of land disposal utilized for the waste, such as a case-by-case extension under Chapter 13, Section 1(e); an exemption under § 268.6, or a nationwide capacity variance [Chapter 13, Section 1(g)(i)(C)]. | Each shipment | Receiving facility | <p>Notice must include:</p> <ul style="list-style-type: none"> ▲ Statement that waste is not prohibited from land disposal ▲ EPA hazardous waste number ▲ Constituents of concern ▲ Treatability group ▲ Manifest number ▲ Waste analysis data (where available) ▲ Date the waste is subject to the prohibitions |
| | | D. Waste is being accumulated in tanks or containers regulated under Chapter 8, Section 3(e) and is being treated in such tanks or containers to meet applicable treatment standards [Chapter 13, Section 1(g)(i)(D)]. | Minimum of 30 days prior to treatment activity | DEQ Director. Delivery must be verified. | <p>Generator must develop, keep on site, and follow a written waste analysis plan describing procedures used to comply with the treatment standards.</p> <p>If waste is shipped off-site, generator also must comply with notification requirement of Chapter 13, Section 1(g)(i)(B).</p> |
| I. | Generator (cont'd) | E. Generator is managing a lab pack containing certain wastes and wishes to use an alternative treatment standard [Chapter 13, Section 1(g)(i)(H)]. [⊗] | Each shipment | Treatment facility | <p>Notice in accordance with Chapter 13, Sections 1(g)(i)(A), (E) and (F), where applicable.</p> <p>Certification in accordance with Chapter 13, Section 1(g)(i)(H).[⊗]</p> |

| Entity | | Scenario | Frequency | Recipient of Notification | Recordkeeping, Notification, and/or Certification Requirements |
|--------|--------------------|---|------------------|---------------------------|--|
| | | F. Small quantity generators with tolling agreements (pursuant to Chapter 8, Section 2(a)(v)) [Chapter 13, Section 1(g)(i)(I)].* | Initial shipment | Treatment facility | <p>Must comply with applicable notification and certification requirements in Chapter 13, Section 1(g)(i).</p> <p>Generator also must retain copy of the notification and certification together with tolling agreement on-site for at least 3 years after termination or expiration of agreement.</p> |
| | | G. Generator has determined waste is restricted based solely on his knowledge of the waste [Chapter 13, Section 1(g)(i)(E)]. | N/A | Generator's file | All supporting data must be retained on-site in generator's files. |
| | | H. Generator has determined waste is restricted based on testing waste or an extract [Chapter 13, Section 1(g)(i)(E)]. | N/A | Generator's file | All waste analysis data must be retained on-site in generator's files. |
| | Generator (cont'd) | I. Generator has determined that waste is excluded from the definition of hazardous or solid waste or exempt from Subtitle C regulation [Chapter 13, Section 1(g)(i)(F)]. | One-time | Generator's file | Notice of generation and subsequent exclusion from the definition of hazardous or solid waste, or exemption from Subtitle C regulation, and information regarding the disposition of the waste. |

| Entity | | Scenario | | Frequency | Recipient of Notification | Recordkeeping, Notification, and/or Certification Requirements |
|--------|-----------------------|----------|---|-----------|--|--|
| | | J. | Generator (or treater) claims that hazardous debris is excluded from the definition of hazardous waste under Chapter 2, Section 1(e)(vi)(A) [Chapter 13, Section 1(g)(iv)]. | One-time | DEQ Director. Notification must be updated as necessary under Chapter 13, Section 1(g)(iv)(B). | <p>Notice must include:</p> <ul style="list-style-type: none"> • Name and address of Subtitle D facility receiving treated debris • EPA hazardous waste number and description of debris as initially generated • Technology used to treat the debris (Table 1 of Chapter 13, Section 4(f)). <p>Certification and recordkeeping in accordance with Chapter 13, Section 1(g)(iv)(C).</p> |
| I. | Generator (Continued) | K. | Generator (or treater) claims that characteristic wastes are no longer hazardous [Chapter 13, Section 1(i)(iv)]. | One-time | Generator's (or treater's) files and DEQ Director. Notification must be updated as necessary under Chapter 13, Section 1(i)(iv). | <p>Notice must include:</p> <ul style="list-style-type: none"> • Name and address of Subtitle D facility receiving the waste • EPA hazardous waste number and description of waste as initially generated • Treatability group • Underlying hazardous constituents. <p>Certification in accordance with Chapter 13, Section 1(i)(iv)(B).</p> |

| Entity | | Scenario | | Frequency | Recipient of Notification | Recordkeeping, Notification, and/or Certification Requirements |
|--------|--------------------|----------|--|---------------|---------------------------|--|
| | | L. | Other recordkeeping requirements [Chapter 13, Section 1(g)(i)(G)] | N/A | Generator's file | Generator must retain a copy of all notices, certifications, and demonstrations, waste analysis data, and other documentation produced pursuant to Chapter 13, Section 1(g) on site for at least 5 years from the date that the waste was last sent to on-site or off-site treatment, storage, or disposal. This period is automatically extended during enforcement actions or as requested by the Director. |
| II. | Treatment Facility | A. | Waste shipped from treatment facility to land disposal facility [Chapter 13, Section 1(g)(ii)(D) and Section 1(g)(ii)(E)]. | Each shipment | Land disposal facility | <p>Notice must include:</p> <ul style="list-style-type: none"> • EPA hazardous waste number • Constituents of concern • Treatability group • Manifest number • Waste analysis data (where available) <p>Applicable certification, in accordance with Chapter 13, Section 1(g)(ii)(E)(I), (II), or (III), stating that the waste or treatment residue has been treated in compliance with applicable treatment standards and prohibitions.</p> |
| | | B. | Waste treatment residue from a treatment or storage facility will be further managed at a different treatment or storage facility [Chapter 13, Section 1(g)(ii)(F)]. | Each shipment | Receiving facility | Treatment, storage, or disposal facility must comply with all notice and certification requirements applicable to generators. |

| Entity | | Scenario | | Frequency | Recipient of Notification | Recordkeeping, Notification, and/or Certification Requirements |
|--------|--------------------------------|----------|---|---------------|--|---|
| II. | Treatment Facility (Continued) | C. | Where wastes are recyclable materials used in a manner constituting disposal subject to Chapter 12, Section 3(a)(ii) [Chapter 13, Section 1(g)(ii)(G)]. | Each shipment | Director (or delegated representative) | No notification to receiving facility required pursuant to Chapter 13, Section 1(g)(ii)(D). Certification as described in Chapter 13, Section 1(g)(ii)(E) and notice with information listed in Chapter 13, Section 1(g)(ii)(D), except manifest number. Recycling facility must keep records of the name and location of each entity receiving hazardous waste-derived products. |
| III. | Land Disposal Facility | A. | Wastes accepted by land disposal facility [Chapter 13, Section 1(g)(iii)]. | N/A | N/A | Maintain copies of notice and certifications specified in Chapter 13, Sections 1(g)(i) and (ii). |

~~CERTIFICATION STATEMENTS~~

~~A. 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 Chapter 13, Section 4 of the Wyoming Hazardous Waste Management Rules and Regulations and all applicable prohibitions set forth in Chapter 13, Section 3(e) of the Wyoming Hazardous Waste Management Rules and Regulations or [RCRA § 3004(d)]. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. (Chapter 13, Section 1(g)(i)(B)(II))~~

~~B. I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack does not contain any waste identified at Chapter 13, Appendix D of the Wyoming Hazardous Waste Management Rules and Regulations. I am aware that there are significant penalties for submitting a false certification, including possibility of fine or imprisonment.~~

~~C. I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, based on my inquiry of those individuals immediately responsible for obtaining~~

~~this information, I believe that the treatment process has been operated and maintained properly so as to comply with the performance levels specified in Chapter 13, Section 4 of the Wyoming Hazardous Waste Management Rules and Regulations, and all applicable prohibitions set forth in Chapter 13, Section 3(c) of the Wyoming Hazardous Waste Management Rules and Regulations or [RCRA § 3004(d)] without impermissible dilution of the prohibited waste. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. (Chapter 13, Section 1(g)(ii)(E)(I))~~

~~D. I certify under penalty of law that the waste has been treated in accordance with the requirements of [40 CFR 268.42] Section 4(c) of this Chapter. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. (Chapter 13, Section 1(g)(ii)(E)(II))~~

~~E. I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and that, based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by incineration in units operated in accordance with Chapter 10, Section 14 or Chapter 11, Section 16 of the Wyoming Hazardous Waste Management Rules and Regulations, or by combustion in fuel substitution units operating in accordance with applicable technical requirements, and I have been unable to detect the nonwastewater organic constituents, despite having used best good faith efforts to analyze for such constituents. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. (Chapter 13, Section 1(g)(ii)(E)(III))~~

~~F. I certify under penalty of law that the waste has been treated in accordance with the requirements of Chapter 13, Section 4(a) of the Wyoming Hazardous Waste Management Rules and Regulations to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment. (Chapter 13, Section 1(g)(ii)(E)(IV))~~

~~G. I certify under penalty of law that the debris have been treated in accordance with the requirements of Chapter 13, Section 4(f) of the Wyoming Hazardous Waste Management Rules and Regulations. I am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment. (Chapter 13, Section 1(g)(iv)(C)(III))~~

Appendix K - Metal Bearing Wastes Prohibited From Dilution in a Combustion Unit According to Chapter 13, Section 1(c)(iii)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. |

| Waste code | Waste description |
|------------|--|
| K006 | Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated) |
| K007 | Wastewater treatment sludge from the production of iron blue pigments. |
| K008 | Oven residue from the production of chrome oxide green pigments |
| K061 | Emission control dust/sludge from the primary production of steel in electric furnaces. |
| K069 | Emission control dust/sludge from secondary lead smelting. |
| K071 | Brine purification muds from the mercury cell processes in chlorine production, where separately prepurified brine is not used |
| K100 | Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting |
| K106 | Sludges from the mercury cell processes for making chlorine. |
| P010 | Arsenic acid H_3AsO_4 |
| P011 | Arsenic oxide As_2O_5 |
| P012 | Arsenic trioxide |
| P013 | Barium cyanide |
| P015 | Beryllium |
| P029 | Copper cyanide $Cu(CN)$ |
| P074 | Nickel cyanide $Ni(CN)_2$ |
| P087 | Osmium tetroxide |
| P099 | Potassium silver cyanide |
| P104 | Silver cyanide |
| P113 | Thallic oxide |
| P114 | Thallium (I) selenite |
| P115 | Thallium (I) sulfate |
| P119 | Ammonium vanadate |
| P120 | Vanadium oxide V_2O_5 |
| P121 | Zinc cyanide |
| U032 | Calcium chromate |
| U145 | Lead phosphate |
| U151 | Mercury |
| U204 | Selenious acid |
| U205 | Selenium disulfide |
| U216 | Thallium (I) chloride |
| U217 | Thallium (I) nitrate |

¹ A combustion unit is defined as any thermal technology subject to Chapter 10, Section 14; Chapter 11, Section 16; and/or Chapter 12, Section 8 of these rules and regulations.