

- 6. Sweepings
- 7. Respiratory cartridge filters
- 8. Cleanup articles
- 9. Plastic bags and other contaminated containers
- 10. Laboratory and process control samples
- 11. K106 and other wastewater treatment plant sludge and filter cake
- 12. Mercury cell sump and tank sludge
- 13. Mercury cell process solids
- 14. Recoverable levels or mercury contained in soil

[59 FR 48042, Sept. 19, 1994]

## PART 267 [Reserved]

## PART 268—LAND DISPOSAL RESTRICTIONS

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APPENDIX VI TO PART 268—RECOMMENDED TECHNOLOGIES TO ACHIEVE DEACTIVATION OF CHARACTERISTICS IN SECTION 268.42

APPENDIX VII TO PART 268—LDR EFFECTIVE DATES OF SURFACE DISPOSED PROHIBITED HAZARDOUS WASTES

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APPENDIX IX TO PART 268—EXTRACTION PROCEDURES (EP) TOXICITY TEST METHOD AND STRUCTURAL INTEGRITY TEST (METHOD 1310)

APPENDIX X TO PART 268 [RESERVED]

APPENDIX XI TO PART 268—METAL BEARING WASTES PROHIBITED FROM DILUTION IN A COMBUSTION UNIT ACCORDING TO 40 CFR 268.3(c)

AUTHORITY: 42 U.S.C. 6905, 6912(a), 6921, and 6924.

### Subpart A—General

#### § 268.1 Purpose, scope, and applicability.

- (a) This part identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances under which an otherwise

prohibited waste may continue to be land disposed.

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

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

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

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

(3) Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under this part, or part 148 of this chapter, are not prohibited if the wastes:

(i) Are disposed into a nonhazardous or hazardous injection well as defined under 40 CFR 146.6(a); and

(ii) Do not exhibit any prohibited characteristic of hazardous waste identified in 40 CFR part 261, subpart C at the point of injection.

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

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

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

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

(iv) The wastes no longer exhibit a prohibited characteristic at the point

of land disposal (i.e., placement in a surface impoundment).

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

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

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

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

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

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

(f) Universal waste handlers and universal waste transporters (as defined in 40 CFR 260.10) are exempt from 40 CFR 268.7 and 268.50 for the hazardous wastes listed below. These handlers are subject to regulation under 40 CFR part 273.

(1) Batteries as described in 40 CFR 273.2;

(2) Pesticides as described in 40 CFR 273.3; and

(3) Thermostats as described in 40 CFR 273.4.

[51 FR 40638, Nov. 7, 1986; 52 FR 21016, June 4, 1987, as amended at 53 FR 27165, July 19, 1988; 53 FR 31212, Aug. 17, 1988; 54 FR 36970, Sept. 6, 1989; 55 FR 22686, June 1, 1990; 58 FR 29884, May 24, 1993; 59 FR 48043, Sept. 19, 1994; 60 FR 25542, May 11, 1995; 61 FR 15663, Apr. 8, 1996; 61 FR 33682, June 28, 1996; 62 FR 26019, May 12, 1997]

### § 268.2 Definitions applicable in this part.

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

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

(b) *Hazardous constituent or constituents* means those constituents listed in appendix VIII to part 261 of this chapter.

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

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

(e) *Polychlorinated biphenyls* or *PCBs* are halogenated organic compounds defined in accordance with 40 CFR 761.3.

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

(g) *Debris* means solid material exceeding a 60 mm particle size that is intended for disposal and that is: A manufactured object; or plant or animal matter; or natural geologic material. However, the following materials are not debris: Any material for which a specific treatment standard is provided in Subpart D, Part 268, namely lead acid batteries, cadmium batteries, and radioactive lead solids; Process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and Intact containers of hazard-

ous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by § 268.45 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

(h) *Hazardous debris* means debris that contains a hazardous waste listed in subpart D of part 261 of this chapter, or that exhibits a characteristic of hazardous waste identified in subpart C of part 261 of this chapter.

(i) *Underlying hazardous constituent* means any constituent listed in § 268.48, Table UTS—Universal Treatment Standards, except fluoride, selenium, sulfides, vanadium, and zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste at a concentration above the constituent-specific UTS treatment standards.

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

(k) *Soil* means unconsolidated earth material composing the superficial geologic strata (material overlying bedrock), consisting of clay, silt, sand, or gravel size particles as classified by the U.S. Conservation Service, or a mixture of such materials with liquids, sludges or solids which is inseparable by simple mechanical removal processes and is made up primarily of soil by volume based on visual inspection.

[55 FR 22686, June 1, 1990, as amended at 56 FR 3877, Jan. 31, 1991; 57 FR 37270, Aug. 18, 1992; 58 FR 8685, Feb. 16, 1993; 58 FR 29884, May 24, 1993; 59 FR 48043, Sept. 19, 1994; 60 FR 244, Jan. 3, 1995; 61 FR 15597, 15662, Apr. 8, 1996; 61 FR 33682, June 28, 1996; 63 FR 28639, May 26, 1998]

EFFECTIVE DATE NOTE: At 63 FR 28639, May 26, 1998, § 268.2 was amended by revising paragraph (i) and adding paragraph (k), effective Aug. 24, 1998. For the convenience of the user, the superseded text is set forth as follows:

**§ 268.2 Definitions applicable in this part.**

\* \* \* \* \*

(i) *Underlying hazardous constituent* means any constituent listed in § 268.48, Table UTS—Universal Treatment Standards, except fluoride, vanadium, and zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste, at a concentration above the constituent-specific UTS treatment standards.

\* \* \* \* \*

**§ 268.3 Dilution prohibited as a substitute for treatment.**

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

(b) Dilution of wastes that are hazardous only because they exhibit a characteristic in treatment systems which include land-based units which treat wastes subsequently discharged to a water of the United States pursuant to a permit issued under section 402 of the Clean Water Act (CWA), or which treat wastes in a CWA-equivalent treatment system, or which treat wastes for the purposes of pretreatment requirements under section 307 of the CWA is not impermissible dilution for purposes of this section unless a method other than DEACT has been specified in § 268.40 as the treatment standard, or unless the waste is a D003 reactive cyanide wastewater or nonwastewater.

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

teria (unless otherwise specifically prohibited from combustion):

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

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

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

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

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

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

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

[61 FR 15663, Apr. 8, 1996, as amended at 61 FR 33682, June 28, 1996; 63 FR 28639, May 26, 1998]

EFFECTIVE DATE NOTE: At 63 FR 28639, May 26, 1998, § 268.3 was amended by adding paragraph (d), effective Aug. 24, 1998.

**§ 268.4 Treatment surface impoundment exemption.**

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

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

(2) The following conditions are met:

(i) *Sampling and testing.* For wastes with treatment standards in subpart D

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

(ii) *Removal.* The following treatment residues (including any liquid waste) must be removed at least annually; residues which do not meet the treatment standards promulgated under subpart D of this part; residues which do not meet the prohibition levels established under subpart C of this part or imposed by statute (where no treatment standards have been established); residues which are from the treatment of wastes prohibited from land disposal under subpart C of this part (where no treatment standards have been established and no prohibition levels apply); or residues from managing listed wastes which are not delisted under §260.22 of this chapter. If the volume of liquid flowing through the impoundment or series of impoundments annually is greater than the volume of the impoundment or impoundments, this flow-through constitutes removal of the supernatant for the purpose of this requirement.

(iii) *Subsequent management.* Treatment residues may not be placed in any other surface impoundment for subsequent management.

(iv) *Recordkeeping.* Sampling and testing and recordkeeping provisions of §§264.13 and 265.13 of this chapter apply.

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

(i) Exempted pursuant to §264.221 (d) or (e) of this chapter, or to §265.221 (c) or (d) of this chapter; or,

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

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

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

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

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

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

I certify under penalty of law that the requirements of 40 CFR 268.4(a)(3) have been met for all surface impoundments being used to treat restricted wastes. I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

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

[51 FR 40638, Nov. 7, 1986; 52 FR 21016, June 4, 1987, as amended at 52 FR 25788, July 8, 1987; 53 FR 31212, Aug. 17, 1988; 62 FR 26019, May 12, 1997; 63 FR 28639, May 26, 1998]

EFFECTIVE DATE NOTE: At 63 FR 28639, May 26, 1998, §268.4 was amended by revising paragraphs (a)(2)(ii) and (a)(2)(iii), effective Aug. 24, 1998. For the convenience of the user, the superseded text is set forth as follows:

**§ 268.4 Treatment surface impoundment exemption.**

(a) \* \* \*

(2) \* \* \*

(ii) *Removal.* The following treatment residues (including any liquid waste) must be removed at least annually: residues which do not meet the treatment standards promulgated under subpart D of this part; residues which do not meet the prohibition levels established under subpart C of this part or imposed by statute (where no treatment standards have been established); residues which are from the treatment of wastes prohibited from land disposal under subpart C of this part (where no treatment standards have been established and no prohibition levels apply); or residues from managing listed wastes which are not delisted under § 260.22 of this chapter. However, residues which are the subject of a valid certification under § 268.8 made no later than a year after placement of the wastes in an impoundment are not required to be removed annually. If the volume of liquid flowing through the impoundment or series of impoundments annually is greater than the volume of the impoundment or impoundments, this flow-through constitutes removal of the supernatant for the purpose of this requirement.

(iii) *Subsequent management.* Treatment residues may not be placed in any other surface impoundment for subsequent management unless the residues are the subject of a valid certification under § 268.8 which allows disposal in surface impoundments meeting the requirements of § 268.8(a).

\* \* \* \* \*

**§ 268.5 Procedures for case-by-case extensions to an effective date.**

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

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

(2) He has entered into a binding contractual commitment to construct or otherwise provide alternative treatment, recovery (e.g., recycling), or disposal capacity that meets the treatment standards specified in subpart D

or, where treatment standards have not been specified, such treatment, recovery, or disposal capacity is protective of human health and the environment.

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

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

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

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

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

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

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

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

(d) An extension will apply only to the waste generated at the individual facility covered by the application and

will not apply to restricted waste from any other facility.

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

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

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

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

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

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

(i) The landfill, if in interim status, is in compliance with the requirements of subpart F of part 265 and § 265.301 (a), (c), and (d) of this chapter; or

(ii) The landfill, if permitted, is in compliance with the requirements of subpart F of part 264 and § 264.301 (c), (d) and (e) of this chapter; or

(iii) The surface impoundment, if in interim status, is in compliance with the requirements of subpart F of part 265, § 265.221 (a), (c), and (d) of this chapter, and RCRA section 3005(j)(1); or

(iv) The surface impoundment, if permitted, is in compliance with the requirements of subpart F of part 264 and § 264.221 (c), (d) and (e) of this chapter; or

(v) The surface impoundment, if newly subject to RCRA section 3005(j)(1) due to the promulgation of additional listings or characteristics for the identification of hazardous waste, is in compliance with the requirements of subpart F of part 265 of this chapter within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of § 265.221 (a), (c) and (d) of this chapter 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) due to the promulgation of additional listings or characteristics of hazardous waste, is in compliance with the requirements of subpart F of part 265 of this chapter within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of § 265.221 (a), (c) and (d) of this chapter

within 48 months after the promulgation of additional listings or characteristics of hazardous waste; or

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

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

[51 FR 40638, Nov. 7, 1986; 52 FR 21016, June 4, 1987, as amended at 52 FR 25788, July 8, 1987; 54 FR 36971, Sept. 6, 1989; 55 FR 23935, June 13, 1990; 57 FR 37270, Aug. 18, 1992]

**§ 268.6 Petitions to allow land disposal of a waste prohibited under subpart C of part 268.**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(iii) The location of the monitoring stations;

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

(v) The specific hazardous constituents to be monitored;

(vi) The implementation schedule for the monitoring program;

(vii) The equipment used at the monitoring stations;

(viii) The sampling and analytical techniques employed; and



(ix) The data recording/reporting procedures.

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

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

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

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

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

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

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

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

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

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

by the Administrator prior to being made.

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

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

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

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

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

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

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

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

(i) If approved, the petition will apply to land disposal of the specific

restricted waste at the individual disposal unit described in the demonstration and will not apply to any other restricted waste at that disposal unit, or to that specific restricted waste at any other disposal unit.

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

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

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

(m) The petition granted by the Administrator does not relieve the petitioner of his responsibilities in the management of hazardous waste under 40 CFR part 260 through part 271.

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

[51 FR 40638, Nov. 7, 1986; 52 FR 21016, June 4, 1987, as amended at 52 FR 25789, July 8, 1987; 53 FR 31212, Aug. 17, 1988; 54 FR 36971, Sept. 6, 1989]

**§ 268.7 Testing, tracking, and record-keeping requirements for generators, treaters, and disposal facilities.**

(a) *Requirements for generators:* (1) A generator of hazardous waste must determine if the waste has to be treated before it can be land disposed. This is done by determining if the hazardous waste meets the treatment standards in § 268.40, § 268.45, or § 268.49. This deter-

mination 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 § 260.11 of this chapter, depending on whether the treatment standard for the waste is expressed as a total concentration or concentration of hazardous constituent in the waste's extract. In addition, some hazardous wastes must be treated by particular treatment methods before they can be land disposed and some soils are contaminated by such hazardous wastes. These treatment standards are also found in § 268.40, and are described in detail in § 268.42, Table 1. 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 § 268.9 of this part in addition to any applicable requirements in this section.

(2) If the waste or contaminated soil does not meet the treatment standard: With the initial shipment of waste to each treatment or storage facility, the generator must send a one-time written notice to each treatment or storage facility receiving the waste, and place a copy in the file. The notice must include the information in column "268.7(a)(2)" of the Generator Paperwork Requirements Table in § 268.7(a)(4). No further notification is necessary until such time that the waste or facility change, in which case a new notification must be sent and a copy placed in the generator's file.

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

I certify under penalty of law that I personally have examined this contaminated soil and it [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and requires treatment to meet the soil treatment standards as provided by 268.49(c).

(ii) [Reserved]

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

(i) With the initial shipment of waste to each treatment, storage, or disposal facility, the generator must send a one-time written notice to each treatment, storage, or disposal facility receiving the waste, and place a copy in the file. The notice must include the information indicated in column “268.7(a)(3)” of the Generator Paperwork Requirements Table in §268.7(a)(4) and the following certification statement, signed by an authorized representative:

I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR part 268 subpart D. I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.

(ii) For contaminated soil, with the initial shipment of wastes to each

treatment, storage, or disposal facility, the generator must send a one-time written notice to each facility receiving the waste and place a copy in the file. The notice must include the information in “268.7(a)(3) of the Generator Paperwork Requirements Table in §268.7(a)(4).

(4) For reporting, tracking, and recordkeeping when exceptions allow certain wastes or contaminated soil that do not meet the treatment standards to be land disposed: There are certain exemptions from the requirement that hazardous wastes or contaminated soil meet treatment standards before they can be land disposed. These include, but are not limited to case-by-case extensions under §268.5, disposal in a nonmigration unit under §268.6, or a national capacity variance or case-by-case capacity variance under subpart C of this part. If a generator’s waste is so exempt, then with the initial shipment of waste, the generator must send a one-time written notice to each land disposal facility receiving the waste. The notice must include the information indicated in column “268.7(a)(4)” of the Generator Paperwork Requirements Table below. If the waste changes, the generator must send a new notice to the receiving facility, and place a copy in their files.

GENERATOR PAPERWORK REQUIREMENTS TABLE

Required information	§268.7 (a)(2)	§268.7 (a)(3)	§268.7 (a)(4)	§268.7 (a)(9)
1. EPA Hazardous Waste Numbers and Manifest Number of first shipment. ....				
2. Statement: this waste is not prohibited from land disposal. ....			✓	
3. The waste is subject to LDRs. The constituents of concern for F001–F005, and F039, and underlying hazardous constituents in characteristic wastes, unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the LDR notice. ....	✓			
4. The notice must include the applicable wastewater/ nonwastewater category (see §§268.2(d) and (f)) and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide) ....	✓	✓		
5. Waste analysis data (when available) ....	✓	✓	✓	
6. Date the waste is subject to the prohibition ....			✓	
7. For hazardous debris, when treating with the alternative treatment technologies provided by §268.45: the contaminants subject to treatment, as described in §268.45(b); and an indication that these contaminants are being treated to comply with §268.45 ....	✓		✓	

GENERATOR PAPERWORK REQUIREMENTS TABLE—Continued

Required information	§ 268.7 (a)(2)	§ 268.7 (a)(3)	§ 268.7 (a)(4)	§ 268.7 (a)(9)
8. For contaminated soil subject to LDRs as provided in 268.49(a), the constituents subject to treatment as described in 268.49(d), and the following statement: This contaminated soil [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and [is subject to/complies with] the soil treatment standards as provided by 268.49(c) or the universal treatment standards. ....	✓			
9. A certification is needed (see applicable section for exact wording)		✓		✓

(5) If a generator is managing and treating prohibited waste or contaminated soil in tanks, containers, or contaminated buildings regulated under 40 CFR 262.34 to meet applicable LDR treatment standards found at § 268.40, the generator must develop and follow a written waste analysis plan which describes the procedures they will carry out to comply with the treatment standards. (Generators treating hazardous debris under the alternative treatment standards of Table 1, § 268.45, however, are not subject to these waste analysis requirements.) The plan must be kept on site in the generator's records, and the following requirements must be met:

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

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

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

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

§ 260.11 of this chapter, and all waste analysis data must be retained on-site in the generator's files.

(7) If a generator determines that he is managing a prohibited waste that is excluded from the definition of hazardous or solid waste or is exempted from Subtitle C regulation under 40 CFR 261.2 through 261.6 subsequent to the point of generation (including deactivated characteristic hazardous wastes managed in wastewater treatment systems subject to the Clean Water Act (CWA) as specified at 40 CFR 261.4(a)(2) or that are CWA-equivalent, or are managed in an underground injection well regulated by the SDWA), he must place a one-time notice describing such generation, subsequent exclusion from the definition of hazardous or solid waste or exemption from RCRA Subtitle C regulation, and the disposition of the waste, in the facility's on-site files.

(8) Generators must retain on-site a copy of all notices, certifications, waste analysis data, and other documentation produced pursuant to this section for at least three years from the date that the waste that is the subject of such documentation was last sent to on-site or off-site treatment, storage, or disposal. The three year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator. The requirements of this paragraph apply to solid wastes even when the hazardous characteristic is removed prior to disposal, or when the waste is excluded from the definition of hazardous or solid waste under 40 CFR 261.2 through

261.6, or exempted from Subtitle C regulation, subsequent to the point of generation.

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

(i) With the initial shipment of waste to a treatment facility, the generator must submit a notice that provides the information in column “§ 268.7(a)(9)” in the Generator Paperwork Requirements Table of paragraph (a)(4) of this section, and the following certification. The certification, which must be signed by an authorized representative and must be placed in the generator’s files, must say the following:

I certify under penalty of law that I personally have examined and am familiar with the waste and that the lab pack contains only wastes that have not been excluded under appendix IV to 40 CFR part 268 and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at 40 CFR 268.42(c). I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

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

(iii) If the lab pack contains characteristic hazardous wastes (D001–D043), underlying hazardous constituents (as defined in § 268.2(i)) need not be determined.

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

(10) Small quantity generators with tolling agreements pursuant to 40 CFR 262.20(e) must comply with the applicable notification and certification requirements of paragraph (a) of this section for the initial shipment of the waste subject to the agreement. Such generators must retain on-site a copy

of the notification and certification, together with the tolling agreement, for at least three years after termination or expiration of the agreement. The three-year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator.

(b) Treatment facilities must test their wastes according to the frequency specified in their waste analysis plans as required by 40 CFR 264.13 (for permitted TSDs) or 40 CFR 265.13 (for interim status facilities). Such testing must be performed as provided in paragraphs (b)(1), (b)(2) and (b)(3) of this section.

(1) For wastes or contaminated soil with treatment standards expressed in the waste extract (TCLP), the owner or operator of the treatment facility must test an extract of the treatment residues, using test method 1311 (the Toxicity Characteristic Leaching Procedure, described in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846 as incorporated by reference in § 260.11 of this chapter) to assure that the treatment residues extract meet the applicable treatment standards.

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

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

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

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

TREATMENT FACILITY PAPERWORK REQUIREMENTS TABLE

Required information	§ 268.7(b)
1. EPA Hazardous Waste Numbers and Manifest Number of first shipment. ....	

TREATMENT FACILITY PAPERWORK REQUIREMENTS TABLE—Continued

Required information	§ 268.7(b)
2. The waste is subject to the LDRs. The constituents of concern for F001–F005, and F039, and underlying hazardous constituents in characteristic wastes, unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the LDR notice. ....	✓
3. The notice must include the applicable wastewater/ nonwastewater category (see §§ 268.2(d) and (f)) and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide) .....	✓
4. Waste analysis data (when available) .....	✓
5. For contaminated soil subject to LDRs as provided in 268.49(a), the constituents subject to treatment as described in 268.49(d) and the following statement, “this contaminated soil [does/does not] exhibit a characteristic of hazardous waste and [is subject to/complies with] the soil treatment standards as provided by 268.49(c). ....	✓
6. A certification statement is needed (see applicable section for exact wording) .....	✓

(4) The treatment facility must submit a one-time certification signed by an authorized representative with the initial shipment of waste or treatment residue of a restricted waste to the land disposal facility. 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 40 CFR 268.40 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 40 CFR 268.49 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) A copy of the certification must be placed in the treatment facility's on-site files. If the waste or treatment residue changes, or the receiving facility changes, a new certification must be sent to the receiving facility, and a copy placed in the file.

(ii) Debris excluded from the definition of hazardous waste under § 261.3(e) of this chapter (i.e., debris treated by an extraction or destruction tech-

nology provided by Table 1, § 268.45, and debris that the Director has determined does not contain hazardous waste), however, is subject to the notification and certification requirements of paragraph (d) of this section rather than the certification requirements of this paragraph.

(iii) For wastes with organic constituents having treatment standards expressed as concentration levels, if compliance with the treatment standards is based in whole or in part on the analytical detection limit alternative specified in § 268.40(d), the certification, signed by an authorized representative, must state the following:

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the nonwastewater organic constituents have been treated by combustion units as specified in 268.42, Table 1. I have been unable to detect the nonwastewater organic constituents, despite having used best good-faith efforts to analyze for such constituents. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(iv) For characteristic wastes that are subject to the treatment standards in § 268.40 (other than those expressed as a required method of treatment) that are reasonably expected to contain underlying hazardous constituents as defined in § 268.2(i); 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 40 CFR 268.40 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) For characteristic wastes that contain underlying hazardous constituents as defined §268.2(i) that are treated on-site to remove the hazardous characteristic to treat underlying hazardous constituents to levels in §268.48 Universal Treatment Standards, the certification must state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 to remove the hazardous characteristic and that underlying hazardous constituents, as defined in §268.2(i) have been treated on-site to meet the §268.48 Universal Treatment Standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

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

(6) Where the wastes are recyclable materials used in a manner constituting disposal subject to the provisions of §268.20(b) regarding treatment standards and prohibition levels, the owner or operator of a treatment facility (i.e., the recycler) is not required to notify the receiving facility, pursuant to paragraph (b)(3) of this section. With each shipment of such wastes the owner or operator of the recycling facility must submit a certification described in paragraph (b)(4) of this section, and a notice which includes the information listed in paragraph (b)(3) of this section (except the manifest number) to the Regional Administrator, or his delegated representative. The recycling facility also must keep records of the name and location of each entity receiving the hazardous waste-derived product.

(c) Except where the owner or operator is disposing of any waste that is a recyclable material used in a manner constituting disposal pursuant to 40 CFR 266.20(b), the owner or operator of any land disposal facility disposing any waste subject to restrictions under this part must:

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

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

(d) Generators or treaters who first claim that hazardous debris is excluded from the definition of hazardous waste under §261.3(e) of this chapter (i.e., debris treated by an extraction or destruction technology provided by Table 1, §268.45, and debris that the EPA Regional Administrator (or his designated representative) or State authorized to implement part 268 requirements has determined does not contain hazardous waste) are subject to the following notification and certification requirements:

(1) A one-time notification, including the following information, must be submitted to the EPA Regional hazardous waste management division director (or his designated representative) or State authorized to implement part 268 requirements, or State authorized to implement part 268 requirements:

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

(3) For debris excluded under §261.3(e)(1) of this chapter, the owner

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or operator of the treatment facility must document and certify compliance with the treatment standards of Table 1, §268.45, as follows:

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

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

(iii) For each shipment of treated debris, a certification of compliance with the treatment standards must be signed by an authorized representative and placed in the facility's files. The certification must state the following: "I certify under penalty of law that the debris has been treated in accordance with the requirements of 40 CFR 268.45. I am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment."

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

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

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

[51 FR 40638, Nov. 7, 1986; 52 FR 21016, June 4, 1987, as amended at 52 FR 25789, July 8, 1987; 53 FR 31213, Aug. 17, 1988; 54 FR 26648, June 23, 1989; 54 FR 36971, Sept. 6, 1989; 55 FR 22687, June 1, 1990; 55 FR 23935, June 13, 1990; 56 FR 3877, Jan. 31, 1991; 57 FR 37270, Aug. 18, 1992; 58 FR 29884, May 24, 1993; 58 FR 46050, Aug. 31, 1993; 59 FR 47980, Sept. 19, 1994; 59 FR 48043, Sept. 19, 1994; 60 FR 244, Jan. 3, 1995; 61 FR 15598, Apr. 8, 1996; 62 FR 26019, May 12, 1997; 63 FR 28639, May 26, 1998]

EFFECTIVE DATE NOTE: At 63 FR 28639, May 26, 1998, §268.7 was amended by revising paragraphs (a)(1), (a)(3)(ii), (a)(7), (b)(1), (b)(2), (b)(5) and (b)(6); by revising the first sen-

tence of paragraphs (a)(2), (a)(3) introductory text, (a)(4), (a)(5) introductory text, (a)(6), and (b)(3) introductory text; by adding paragraph (a)(2)(i) and three sentences to the end of paragraph (b)(4) introductory text, adding paragraphs (b)(4)(iv), (b)(4)(v), and (e) and adding and reserving paragraph (a)(2)(ii); and by revising entries 1 and 3, designating entry 8 as 9, and adding a new entry 8 in the table in paragraph (a)(4), and by revising entries 1 and 2, designating entry 5 as 6, and adding a new entry 5 in the table in paragraph (b)(3)(ii), effective Aug. 24, 1998. For the convenience of the user, the superseded text is set forth as follows:

### **§268.7 Testing, tracking, and recordkeeping requirements for generators, treaters, and disposal facilities.**

(a) \* \* \* (1) Determine if the waste has to be treated before being land disposed, as follows: A generator of a hazardous waste must determine if the waste has to be treated before it can be land disposed. This is done by determining if the hazardous waste meets the treatment standards in §268.40 or §268.45. 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 for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as referenced in §260.11 of this chapter, 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. These treatment standards are also found in §268.40, and are described in detail in §268.42, Table 1. These 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 that displays a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity, they must comply with the special requirements of §268.9 of this part in addition to any applicable requirements in this section.

(2) If the waste 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.\* \* \*



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(3) If the waste meets the treatment standard at the original point of generation:

\* \* \* \* \*

(ii) If the waste changes, the generator must send a new notice and certification to the receiving facility, and place a copy in their files. Generators of hazardous debris excluded from the definition of hazardous

waste under § 261.3(f) of this chapter are not subject to these requirements.

(4) For reporting, tracking and record-keeping when exceptions allow certain wastes that do not meet the treatment standards to be land disposed: There are certain exemptions from the requirement that hazardous wastes meet treatment standards before they can be land disposed. \* \* \*

\* \* \* \* \*

GENERATOR PAPERWORK REQUIREMENTS TABLE

Required information	§ 268.7 (a)(2)	§ 268.7 (a)(3)	§ 268.7 (a)(4)	§ 268.7 (a)(9)
1. EPA Hazardous Waste and Manifest numbers .....	✓	✓	✓	✓
3. The waste is subject to the LDRs. The constituents of concern for F001–F005, and F039, and underlying hazardous constituents (for wastes that are not managed in a Clean Water Act (CWA) or CWA-equivalent facility), 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 .....	✓	✓		

\* \* \* \* \*

(5) If a generator is managing and treating prohibited waste in tanks, containers, or containment buildings regulated under 40 CFR 262.34 to meet applicable LDR treatment standards found at § 268.40, the generator must develop and follow a written waste analysis plan which describes the procedures they will carry out to comply with the treatment standards. \* \* \*

\* \* \* \* \*

(6) If a generator determines that the waste is restricted based solely on his knowledge of the waste, all supporting data used to make this determination must be retained on-site in the generator's files. \* \* \*

(7) If a generator determines that he is managing a restricted waste that is excluded from the definition of hazardous or solid waste or exempt from Subtitle C regulation, under 40 CFR 261.2 through 261.6 subsequent to the point of generation (including deactivated characteristic hazardous wastes managed in wastewater treatment systems subject to the Clean Water Act (CWA) as specified at 40 CFR 261.4(a)(2), or are CWA-equivalent), he must place a one-time notice stating such generation, subsequent exclusion

from the definition of hazardous or solid waste or exemption from RCRA Subtitle C regulation, and the disposition of the waste, in the facility's file.

\* \* \* \* \*

(b) \* \* \*

(1) For wastes with treatment standards expressed as concentrations in the waste extract (TCLP), the owner or operator of the treatment facility must test an extract of the treatment residues, using test method 1311 (the Toxicity Characteristic Leaching Procedure, described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 as incorporated by reference in § 260.11 of this chapter), to assure that the treatment residues extract meet the applicable treatment standards.

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

(3) A one-time notice must be sent with the initial shipment of waste to the land disposal facility. \* \* \*

(ii) \* \* \*

TREATMENT FACILITY PAPERWORK REQUIREMENTS TABLE

Required information	§ 268.7(b)
1. EPA Hazardous Waste and Manifest numbers .....	✓
2. The waste is subject to the LDRs. The constituents of concern for F001–F005, and F039, and underlying hazardous constituents (for wastes that are not managed in a Clean Water Act (CWA) or CWA-equivalent facility), 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. ....	✓

\* \* \* \* \*

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

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

\* \* \* \* \*

#### § 268.8 [Reserved]

#### § 268.9 Special rules regarding wastes that exhibit a characteristic.

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

(b) Where a prohibited waste is both listed under 40 CFR part 261, subpart D

and exhibits a characteristic under 40 CFR part 261, subpart C, the treatment standard for the waste code listed in 40 CFR part 261, subpart D will operate in lieu of the standard for the waste code under 40 CFR part 261, subpart C, provided that the treatment standard for the listed waste includes a treatment standard for the constituent that causes the waste to exhibit the characteristic. Otherwise, the waste must meet the treatment standards for all applicable listed and characteristic waste codes.

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

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

(1) The notification must include the following information:

(i) Name and address of the RCRA Subtitle D facility receiving the waste shipment; and

(ii) A description of the waste as initially generated, including the applicable EPA hazardous waste code(s), treatability group(s), and underlying hazardous constituents (as defined in § 268.2(i)), unless the waste will be treated and monitored for all underlying hazardous constituents. If all underlying hazardous constituents will be

treated and monitored, there is no requirement to list any of the underlying hazardous constituents on the notice.

(2) The certification must be signed by an authorized representative and must state the language found in § 268.7(b)(5).

(i) If treatment removes the characteristic but does not treat underlying hazardous constituents, then the certification found in § 268.7(b)(5)(iv) applies.

(ii) [Reserved]

[55 FR 22688, June 1, 1990, as amended at 56 FR 3878, Jan. 31, 1991; 57 FR 37271, Aug. 18, 1992; 58 FR 29885, May 24, 1993; 59 FR 48045, Sept. 19, 1994; 60 FR 245, Jan. 3, 1995; 61 FR 15599, 15662, Apr. 8, 1996; 62 FR 26022, May 12, 1997]

### **Subpart B—Schedule for Land Disposal Prohibition and Establishment of Treatment Standards**

SOURCE: 51 FR 19305, May 28, 1986, unless otherwise noted.

#### **§§ 268.10—268.12 [Reserved]**

#### **§ 268.13 Schedule for wastes identified or listed after November 8, 1984.**

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

#### **§ 268.14 Surface impoundment exemptions.**

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

(b) Wastes which are newly identified or listed under section 3001 after November 8, 1984, and stored in a surface impoundment that is newly subject to subtitle C of RCRA as a result of the additional identification or listing, may continue to be stored in the surface impoundment for 48 months after the promulgation of the additional listing or characteristic, notwithstanding that the waste is otherwise prohibited from land disposal, provided that the

surface impoundment is in compliance with the requirements of subpart F of part 265 of this chapter within 12 months after promulgation of the new listing or characteristic.

(c) Wastes which are newly identified or listed under section 3001 after November 8, 1984, and treated in a surface impoundment that is newly subject to subtitle C of RCRA as a result of the additional identification or listing, may continue to be treated in that surface impoundment, notwithstanding that the waste is otherwise prohibited from land disposal, provided that surface impoundment is in compliance with the requirements of subpart F of part 265 of this chapter within 12 months after the promulgation of the new listing or characteristic. In addition, if the surface impoundment continues to treat hazardous waste after 48 months from promulgation of the additional listing or characteristic, it must then be in compliance with § 268.4.

[57 FR 37271, Aug. 18, 1992]

### **Subpart C—Prohibitions on Land Disposal**

#### **§ 268.30 Waste specific prohibitions—wood preserving wastes.**

(a) Effective August 11, 1997, the following wastes are prohibited from land disposal: the wastes specified in 40 CFR part 261 as EPA Hazardous Waste numbers F032, F034, and F035.

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

(c) Between May 12, 1997 and May 12, 1999, soil and debris contaminated with F032, F034, F035; and radioactive waste mixed with F032, F034, and F035 may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in § 268.5(h)(2) of this part.

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

(1) The wastes meet the applicable treatment standards specified in Subpart D of this part;

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

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

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

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

[62 FR 26022, May 12, 1997]

EFFECTIVE DATE NOTE: At 62 FR 26022, May 12, 1997, § 268.30 was revised, effective Aug. 11, 1997, except paragraph (b), which is effective May 12, 1999.

**§ 268.31 Waste specific prohibitions—Dioxin-containing wastes.**

(a) Effective November 8, 1988, the dioxin-containing wastes specified in 40 CFR 261.31 as EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, F027, and F028, are prohibited from land disposal unless the following condition applies:

(1) The F020–F023 and F026–F028 dioxin-containing waste is contaminated soil and debris resulting from a response action taken under section 104 or 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) or a corrective action taken under subtitle C of the Resource Conservation and Recovery Act (RCRA).

(b) Effective November 8, 1990, the F020–F023 and F026–F028 dioxin-containing wastes listed in paragraph

(a)(1) of this section are prohibited from land disposal.

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

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

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

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

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

[53 FR 31216, Aug. 17, 1988]

**§ 268.32 [Reserved]**

**§ 268.33 Waste-specific prohibitions—organobromine wastes.**

(a) Effective November 4, 1998, the waste specified in 40 CFR 261.32 as EPA Hazardous Wastes Numbers K140, and in 40 CFR 261.33 as EPA Hazardous waste number U408 are prohibited from land disposal. In addition, soils and debris contaminated with these wastes, radioactive wastes mixed with these hazardous wastes, and soils and debris contaminated with these radioactive mixed wastes, are prohibited from land disposal.

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

(1) The wastes meet the applicable treatment standards specified in subpart D of this part;

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

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

(4) Hazardous debris that has met treatment standards in § 268.40 or in the

alternative treatment standards in § 268.45; or

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

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

[63 FR 24625, May 4, 1998; 63 FR 35149, June 29, 1998]

EFFECTIVE DATE NOTES: 1. At 63 FR 24625, May 4, 1998, § 268.33 was added, effective Nov. 4, 1998.

2. At 63 FR 35149, June 29, 1998, § 268.33 was amended by removing paragraph (b), redesignating paragraph (c) as (b), and revising redesignated paragraphs (b) introductory text and (c), effective Nov. 4, 1998.

**§ 268.34 Waste specific prohibitions—  
toxicity characteristic metal wastes.**

(a) Effective August 24, 1998, the following wastes are prohibited from land disposal: the wastes specified in 40 CFR Part 261 as EPA Hazardous Waste numbers D004–D011 that are newly identified (i.e. wastes, soil, or debris identified as hazardous by the Toxic Characteristic Leaching Procedure but not the Extraction Procedure), and waste, soil, or debris from mineral processing operations that is identified as hazardous by the specifications at 40 CFR Part 261.

(b) 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.

(c) Between May 26, 1998 and May 26, 2000, newly identified characteristic wastes from elemental phosphorus processing, radioactive waste mixed with D004–D011 wastes that are newly identified (i.e., wastes, soil, or debris identified as hazardous by the Toxic Characteristic Leaching Procedure but not the Extraction Procedure), or mixed with newly identified characteristic mineral processing wastes, soil, or debris may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in § 268.5(h) of this part.

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

(1) The wastes meet the applicable treatment standards specified in subpart D of this part:

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

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

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

(e) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in § 268.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as 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 § 268.48 of this part, the waste is prohibited from land disposal, and all requirements of part 268

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are applicable, except as otherwise specified.

[63 FR 28641, May 26, 1998]

EFFECTIVE DATE NOTE: At 63 FR 28641, May 26, 1998, §268.34 was added, effective Aug. 24, 1998.

### §§ 268.35–268.36 [Reserved]

#### **§ 268.37 Waste specific prohibitions—ignitable and corrosive characteristic wastes whose treatment standards were vacated.**

(a) Effective August 9, 1993, the wastes specified in 40 CFR 261.21 as D001 (and is not in the High TOC Ignitable Liquids Subcategory), and specified in §261.22 as D002, that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies.

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

[58 FR 29885, May 24, 1993]

#### **§ 268.38 Waste specific prohibitions—newly identified organic toxicity characteristic wastes and newly listed coke by-product and chlorotoluene production wastes.**

(a) Effective December 19, 1994, the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste numbers K141, K142, K143, K144, K145, K147, K148, K149, K150, and K151 are prohibited from land disposal. In addition, debris contami-

nated 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 40 CFR 261.24, Table 1 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.

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

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

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

(1) The wastes meet the applicable treatment standards specified in Subpart D of this part;

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

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

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

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

[59 FR 48045, Sept. 19, 1995]

**§ 268.39 Waste specific prohibitions—spent aluminum potliners; reactive; and carbamate wastes.**

(a) On July 8, 1996, the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste numbers K156–K159, and K161; and in 40 CFR 261.33 as EPA Hazardous Waste numbers P127, P128, P185, P188–P192, P194, P196–P199, P201–P205, U271, U278–U280, U364, U367, U372, U373, U387, U389, U394, U395, U404, and U409–U411 are prohibited from land disposal. In addition, soil and debris contaminated

with these wastes are prohibited from land disposal.

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

(c) On October 8, 1997, the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste number K088 are prohibited from land disposal. In addition, soil and debris contaminated with this waste are prohibited from land disposal.

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

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

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

(1) The wastes meet the applicable treatment standards specified in Subpart D of this part;

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

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

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

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

[61 FR 15663, Apr. 8, 1996, as amended at 61 FR 33683, June 28, 1996; 62 FR 1997, Jan. 14, 1997; 62 FR 32979, June 17, 1997; 62 FR 37699, July 14, 1997]

### Subpart D—Treatment Standards

#### § 268.40 Applicability of treatment standards.

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

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

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

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

(b) For wastewaters, compliance with concentration level standards is based on maximums for any one day, except for D004 through D011 wastes for which the previously promulgated treatment standards based on grab samples re-

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

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

(d) Notwithstanding the prohibitions specified in paragraph (a) of this section, treatment and disposal facilities may demonstrate (and certify pursuant to 40 CFR 268.7(b)(5)) compliance with the treatment standards for organic constituents specified by a footnote in the table “Treatment Standards for Hazardous Wastes” in this section, provided the following conditions are satisfied:

(1) The treatment standards for the organic constituents were established based on incineration in units operated in accordance with the technical requirements of 40 CFR part 264, subpart O, or based on combustion in fuel substitution units operating in accordance with applicable technical requirements;

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

(3) The treatment or disposal facility may demonstrate compliance with organic constituents if good-faith analytical efforts achieve detection limits for the regulated organic constituents that do not exceed the treatment standards



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<sup>2</sup>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.

<sup>3</sup>Concentration standards for wastewaters are expressed in mg/l and are based on analysis of composite samples.

<sup>4</sup>All treatment standards expressed as a Technology Code or combination of Technology Codes are explained in detail in 40 CFR 268.42 Table 1—Technology Codes and Descriptions of Technology-Based Standards.

<sup>5</sup>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 40 CFR Part 264 Subpart O or Part 265 Subpart O, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in 40 CFR 268.40(d). All concentration standards for nonwastewaters are based on analysis of grab samples.

<sup>6</sup>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.

<sup>7</sup>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 40 CFR 260.11, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.

<sup>8</sup>These wastes, when rendered nonhazardous and then subsequently managed in CWA, or CWA-equivalent systems, are not subject to treatment standards. (See §268.1(c) (3) and (4)).

<sup>9</sup>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)).

<sup>10</sup>Between August 26, 1996, and August 26, 1997, the treatment standard for this waste may be satisfied by either meeting the constituent concentrations in this table or by treating the waste by the specified technologies: combustion, as defined by the technology code CMBST at §268.42 Table 1 of this Part, for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code

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CMBST at §268.42 Table 1 of this Part, for wastewaters.

<sup>11</sup>For these wastes, the definition of CMBST is limited to: (1) combustion units operating under 40 CFR 266, (2) combustion units permitted under 40 CFR Part 264, Subpart O, or (3) combustion units operating under 40 CFR 265, Subpart O, which have obtained a determination of equivalent treatment under 268.42 (b).

[59 FR 48046, Sept. 19, 1994, as amended by 60 FR 245, Jan. 3, 1995; 61 FR 15600, 15662, 15663, Apr. 8, 1996; 61 FR 33683, June 28, 1996; 61 FR 43927, Aug. 26, 1996; 62 FR 7504, Feb. 19, 1997; 62 FR 26022, May 12, 1997; 62 FR 32979, June 17, 1997; 62 FR 45572, Aug. 28, 1997; 63 FR 28641, May 26, 1998]

EFFECTIVE DATE NOTE: At 63 FR 28641, May 26, 1998, §268.40 was amended by revising paragraph (e), adding paragraph (h), and revising the Table of Treatment Standards, effective Aug. 24, 1998, with the exception of the table entries for K140 and U408, which are effective Nov. 4, 1998. For the convenience of the user, the superseded text is set forth below. The superseded table remaining in effect until Aug. 24, 1998, appears in the July 1, 1997, revision of 40 CFR parts 266–299.

### §268.40 Applicability of treatment standards.

\* \* \* \* \*

(e) For characteristic wastes (D001–D003, and D012–D043) that are subject to treatment standards in the following table "Treatment Standards for Hazardous Wastes," all underlying hazardous constituents (as defined in §268.2(i)) must meet Universal Treatment Standards, found in §268.48, "Table UTS," prior to land disposal as defined in §268.2(c) of this part.

\* \* \* \* \*

### §268.41 Treatment standards expressed as concentrations in waste extract.

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

[59 FR 48103, Sept. 19, 1994]

### §268.42 Treatment standards expressed as specified technologies.

NOTE: For the requirements previously found in this section in Table 2—Technology-Based Standards By RCRA Waste Code, and Table 3—Technology-Based Standards for

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Specific Radioactive Hazardous Mixed Waste, refer to §268.40.

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

(1) Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 50 ppm but less than 500 ppm must be incinerated in accordance with the technical requirements of 40 CFR 761.70 or burned in high efficiency boilers in accordance with the technical requirements of 40 CFR 761.60. Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 500 ppm must be incinerated in accordance with the technical requirements of 40 CFR 761.70. Thermal treatment under this section must also be in compliance with applicable regulations in parts 264, 265, and 266.

(2) Nonliquid hazardous wastes containing halogenated organic compounds (HOCs) in total concentration greater than or equal to 1,000 mg/kg and liquid HOC-containing wastes that are prohibited under §268.32(e)(1) of this

part must be incinerated in accordance with the requirements of 40 CFR part 264, subpart O, or 40 CFR part 265, subpart O. These treatment standards do not apply where the waste is subject to a part 268, subpart D, treatment standard for a specific HOC (such as a hazardous waste chlorinated solvent for which a treatment standard is established under §268.41(a)).

(3) 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 of this section. For purposes of this paragraph, *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.

TABLE 1.—TECHNOLOGY CODES AND DESCRIPTION OF TECHNOLOGY-BASED STANDARDS—Continued

Technology code	Description of technology-based standards
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 40 CFR part 264, subpart O, or 40 CFR part 265, subpart O, or 40 CFR part 266, subpart H, and in other units operated in accordance with applicable technical operating requirements; and certain non-combustive technologies, such as the Catalytic Extraction Process.
DEACT:	Deactivation to remove the hazardous characteristics of a waste due to its ignitability, corrosivity, and/or reactivity.
FSUBS:	Fuel substitution in units operated in accordance with applicable technical operating requirements.
HLVIT:	Vitrification of high level mixed radioactive wastes in units in compliance with all applicable radioactive protection requirements under control of the Nuclear Regulatory Commission.
IMERC:	Incineration of wastes containing organics and mercury in units operated in accordance with the technical operating requirements of 40 CFR part 264 subpart O and part 265 subpart O. All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (e.g., High or Low Mercury Subcategories).
INCIN:	Incineration in units operated in accordance with the technical operating requirements of 40 CFR part 264 subpart O and part 265 subpart O.
LLEXT:	Liquid-liquid extraction (often referred to as solvent extraction) of organics from liquid wastes into an immiscible solvent for which the hazardous constituents have a greater solvent affinity, resulting in an extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and a raffinate (extracted liquid waste) proportionately low in organics that must undergo further treatment as specified in the standard.
MACRO:	Macroencapsulation with surface coating materials such as polymeric organics (e.g., resins and plastics) or with a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media. Macroencapsulation specifically does not include any material that would be classified as a tank or container according to 40 CFR 260.10.
NEUTR:	Neutralization with the following reagents (or waste reagents) or combinations of reagents: (1) Acids; (2) bases; or (3) water (including wastewaters) resulting in a pH greater than 2 but less than 12.5 as measured in the aqueous residuals.
NLDBR:	No land disposal based on recycling.
POLYM:	Formation of complex high-molecular weight solids through polymerization of monomers in high-TOC D001 non-wastewaters which are chemical components in the manufacture of plastics.
PRECP:	Chemical precipitation of metals and other inorganics as insoluble precipitates of oxides, hydroxides, carbonates, sulfides, sulfates, chlorides, fluorides, or phosphates. The following reagents (or waste reagents) are typically used alone or in combination: (1) Lime (i.e., containing oxides and/or hydroxides of calcium and/or magnesium; (2) caustic (i.e., sodium and/or potassium hydroxides; (3) soda ash (i.e., sodium carbonate); (4) sodium sulfide; (5) ferric sulfate or ferric chloride; (6) alum; or (7) sodium sulfate. Additional flocculating, coagulation or similar reagents/processes that enhance sludge dewatering characteristics are not precluded from use.
RBERY:	Thermal recovery of Beryllium.
RCGAS:	Recovery/reuse of compressed gases including techniques such as reprocessing of the gases for reuse/resale; filtering/adsorption of impurities; remixing for direct reuse or resale; and use of the gas as a fuel source.
RCORR:	Recovery of acids or bases utilizing one or more of the following recovery technologies: (1) Distillation (i.e., thermal concentration); (2) ion exchange; (3) resin or solid adsorption; (4) reverse osmosis; and/or (5) incineration for the recovery of acid—Note: this does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.
RLEAD:	Thermal recovery of lead in secondary lead smelters.

TABLE 1.—TECHNOLOGY CODES AND DESCRIPTION OF TECHNOLOGY-BASED STANDARDS—Continued

Technology code	Description of technology-based standards
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)— <i>Note:</i> 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)— <i>Note:</i> this does not preclude the use of other physical phase separation techniques such as a decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.
RTHRM:	Thermal recovery of metals or inorganics from nonwastewaters in units identified as industrial furnaces according to 40 CFR 260.10 (1), (6), (7), (11), and (12) under the definition of "industrial furnaces".
RZINC:	Resmelting in high temperature metal recovery units for the purpose of recovery of zinc.
STABL:	Stabilization with the following reagents (or waste reagents) or combinations of reagents: (1) Portland cement; or (2) lime/pozzolans (e.g., fly ash and cement kiln dust)—this does not preclude the addition of reagents (e.g., iron salts, silicates, and clays) designed to enhance the set/cure time and/or compressive strength, or to overall reduce the leachability of the metal or inorganic.
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 § 268.42, Table 2 by indicating the five letter technology code that must be applied first, then the designation "fb." (an abbreviation for "followed by"), then the five letter technology code for the technology that must be applied next, and so on.

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

(b) Any person may submit an application to the Administrator demonstrating that an alternative treatment method can achieve a measure of performance equivalent to that achieved by methods specified in paragraphs (a), (c), and (d) of this section for wastes or specified in Table 1 of § 268.45 for hazardous debris. The applicant must submit information demonstrating that his treatment method is in compliance with federal, state, and local requirements and is protective of human health and the environment. On the basis of such information and any other available information,

the Administrator may approve the use of the alternative treatment method if he finds that the alternative treatment method provides a measure of performance equivalent to that achieved by methods specified in paragraphs (a), (c), and (d) of this section for wastes or in Table 1 of § 268.45 for hazardous debris. Any approval must be stated in writing and may contain such provisions and conditions as the Administrator deems appropriate. The person to whom such approval is issued must comply with all limitations contained in such a determination.

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

(1) The lab packs comply with the applicable provisions of 40 CFR 264.316 and 40 CFR 265.316;

(2) The lab pack does not contain any of the wastes listed in Appendix IV to part 268;

(3) The lab packs are incinerated in accordance with the requirements of 40 CFR part 264, subpart O or 40 CFR part 265, subpart O; and

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

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

[51 FR 40642, Nov. 7, 1986, as amended at 52 FR 25790, July 8, 1987; 55 FR 22692, June 1, 1990; 56 FR 3884, Jan. 31, 1991; 57 FR 8089, Mar. 6, 1992; 57 FR 37273, Aug. 18, 1992; 58 FR 29885, May 24, 1993; 59 FR 31552, June 20, 1994; 59 FR 48103, Sept. 19, 1994; 60 FR 302, Jan. 3, 1995; 61 FR 15654, Apr. 8, 1996; 62 FR 26025, May 12, 1997; 63 FR 28738, May 26, 1998]

EFFECTIVE DATE NOTE: At 63 FR 28738, May 26, 1998, § 268.42 was amended by revising the introductory text to paragraph (a) and removing paragraphs (a)(1), (a)(2), and (a)(3), effective Aug. 24, 1998. For the convenience of the user, the superseded text is set forth as follows:

### § 268.42 Treatment standards expressed as specified technologies.

(a) The following wastes in paragraphs (a)(1) and (a)(2) of this section and in the table in § 268.40 "Treatment Standards for Hazardous Wastes," for which standards are expressed as a treatment method rather than a concentration level, must be treated using the technology or technologies specified in

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paragraphs (a)(1) and (a)(2) and Table 1 of this section.

\* \* \* \* \*

### § 268.43 Treatment standards expressed as waste concentrations.

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

[59 FR 48103, Sept. 19, 1994]

### § 268.44 Variance from a treatment standard.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

be treated to the specified level or by the specified method; or

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

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

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

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

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

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

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

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

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

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concentrations at the site where the contaminated soil will land disposed.

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

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

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

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

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

(m) For all variances, the petitioner must also demonstrate that compliance with any given treatment variance is sufficient to minimize threats to human health and the environment posed by land disposal of the waste. In evaluating this demonstration, EPA may take into account whether a treatment variance should be approved if the subject waste is to be used in a manner constituting disposal pursuant to 40 CFR 266.20 through 266.23.

(n) [Reserved]

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

TABLE—WASTES EXCLUDED FROM THE TREATMENT STANDARDS UNDER § 268.40

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

(<sup>1</sup>)—A facility may certify compliance with these treatment standards according to provisions in 40 CFR 268.7.

(<sup>2</sup>)—Cyanide Wastewater Standards for F006 are based on analysis of composite samples.

(<sup>3</sup>)—These facilities must comply with 0.86 mg/l for amenable cyanides in the wastewater exiting the alkaline chlorination system. These facilities must also comply with 40 CFR

§ 268.7 a.4 for appropriate monitoring frequency consistent with the facilities' waste analysis plan.

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

**Note:** NA means Not Applicable.

[51 FR 40642, Nov. 7, 1986, as amended at 52 FR 21017, June 4, 1987; 53 FR 31221, Aug. 17, 1988; 54 FR 36972, Sept. 6, 1989; 56 FR 12355, Mar. 25, 1991; 61 FR 55727, Oct. 28, 1996; 62 FR 26025, May 12, 1997; 62 FR 64509, Dec. 5, 1997; 63 FR 28738, May 26, 1998]

EFFECTIVE DATE NOTE: At 63 FR 28738, May 26, 1998, § 268.44 was amended by redesignating paragraph (h)(3) as (h)(5) and adding new paragraphs (h) (3) and (4), effective Aug. 24, 1998.



**§ 268.45 Treatment standards for hazardous debris.**

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

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

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

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

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

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

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

(1) *Toxicity characteristic debris.* The contaminants subject to treatment for debris that exhibits the Toxicity Char-

acteristic (TC) by § 261.24 of this chapter are those EP constituents for which the debris exhibits the TC toxicity characteristic.

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

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

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

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

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

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

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

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

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

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

TABLE 1.—ALTERNATIVE TREATMENT STANDARDS FOR HAZARDOUS DEBRIS <sup>1</sup>

Technology description	Performance and/or design and operating standard	Contaminant restrictions <sup>2</sup>
<b>A. Extraction Technologies:</b>		
<b>1. Physical Extraction</b>		
a. <i>Abrasive Blasting:</i> 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).	<i>Glass, Metal, Plastic, Rubber:</i> Treatment to a clean debris surface. <sup>3</sup> <i>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood:</i> Removal of at least 0.6 cm of the surface layer; treatment to a clean debris surface. <sup>3</sup>	<i>All Debris:</i> None.
b. <i>Scarification, Grinding, and Planing:</i> Process utilizing striking piston heads, saws, or rotating grinding wheels such that contaminated debris surface layers are removed.	Same as above .....	Same as above.
c. <i>Spalling:</i> Drilling or chipping holes at appropriate locations and depth in the contaminated debris surface and applying a tool which exerts a force on the sides of those holes such that the surface layer is removed. The surface layer removed remains hazardous debris subject to the debris treatment standards.	Same as above .....	Same as above.
d. <i>Vibratory Finishing:</i> Process utilizing scrubbing media, flushing fluid, and oscillating energy such that hazardous contaminants or contaminated debris surface layers are removed. <sup>4</sup>	Same as above .....	Same as above.
e. <i>High Pressure Steam and Water Sprays:</i> Application of water or steam sprays of sufficient temperature, pressure, residence time, agitation, surfactants, and detergents to remove hazardous contaminants from debris surfaces or to remove contaminated debris surface layers.	Same as above .....	Same as above.
<b>2. Chemical Extraction</b>		
a. <i>Water Washing and Spraying:</i> 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.	<i>All Debris:</i> Treatment to a clean debris surface <sup>3</sup> ; <i>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood:</i> Debris must be no more than 1.2 cm (½ inch) in one dimension (i.e., thickness limit, <sup>5</sup> except that this thickness limit may be waived under an "Equivalent Technology" approval under § 268.42(b); <sup>6</sup> debris surfaces must be in contact with water solution for at least 15 minutes	<i>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood:</i> 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, <sup>6</sup> an "Equivalent Technology" approval under § 268.42(b) must be obtained. <sup>8</sup>
b. <i>Liquid Phase Solvent Extraction:</i> 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. <sup>4</sup>	Same as above .....	<i>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood:</i> Same as above, except that contaminant must be soluble to at least 5% by weight in the solvent.

TABLE 1.—ALTERNATIVE TREATMENT STANDARDS FOR HAZARDOUS DEBRIS<sup>1</sup>—Continued

Technology description	Performance and/or design and operating standard	Contaminant restrictions <sup>2</sup>
<p>c. <i>Vapor Phase Solvent Extraction</i>: 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.<sup>4</sup></p> <p>3. Thermal Extraction</p> <p>a. <i>High Temperature Metals Recovery</i>: 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>b. <i>Thermal Desorption</i>: 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.<sup>7</sup></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>For refining furnaces, treated debris must be separated from treatment residuals using simple physical or mechanical means,<sup>9</sup> 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><i>All Debris</i>: Obtain an “Equivalent Technology” approval under § 268.42(b);<sup>8</sup> treated debris must be separated from treatment residuals using simple physical or mechanical means,<sup>9</sup> 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><i>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood</i>: Debris must be no more than 10 cm (4 inches) in one dimension (i.e., thickness limit),<sup>5</sup> except that this thickness limit may be waived under the “Equivalent Technology” approval</p>	<p>Same as above.</p> <p><i>Debris contaminated with a dioxin-listed waste</i>:<sup>5</sup> Obtain an “Equivalent Technology” approval under § 268.42(b).<sup>8</sup></p> <p><i>All Debris</i>: Metals other than mercury.</p>
<p>B. Destruction Technologies:</p> <p>1. <i>Biological Destruction (Biodegradation)</i>: Removal of hazardous contaminants from debris surfaces and surface pores in an aqueous solution and biodegradation of organic or non-metallic inorganic compounds (i.e., inorganics that contain phosphorus, nitrogen, or sulfur) in units operated under either aerobic or anaerobic conditions.</p> <p>2. Chemical Destruction</p> <p>a. <i>Chemical Oxidation</i>: 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.<sup>4</sup> Chemical oxidation specifically includes what is referred to as alkaline chlorination.</p>	<p><i>All Debris</i>: Obtain an “Equivalent Technology” approval under § 268.42(b);<sup>8</sup> treated debris must be separated from treatment residuals using simple physical or mechanical means,<sup>9</sup> 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><i>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood</i>: Debris must be no more than 1.2 cm (½ inch) in one dimension (i.e., thickness limit),<sup>5</sup> except that this thickness limit may be waived under the “Equivalent Technology” approval</p> <p><i>All Debris</i>: Obtain an “Equivalent Technology” approval under § 268.42(b);<sup>8</sup> treated debris must be separated from treatment residuals using simple physical or mechanical means,<sup>9</sup> 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><i>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood</i>: Debris must be no more than 1.2 cm (½ inch) in one dimension (i.e., thickness limit),<sup>5</sup> except that this thickness limit may be waived under the “Equivalent Technology” approval</p>	<p><i>All Debris</i>: Metal contaminants.</p> <p><i>All Debris</i>: Metal contaminants.</p>

TABLE 1.—ALTERNATIVE TREATMENT STANDARDS FOR HAZARDOUS DEBRIS<sup>1</sup>—Continued

Technology description	Performance and/or design and operating standard	Contaminant restrictions <sup>2</sup>
<p>b. <i>Chemical Reduction</i>: 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.<sup>4</sup></p> <p>3. <i>Thermal Destruction</i>: Treatment in an incinerator operating in accordance with Subpart O of Parts 264 or 265 of this chapter; a boiler or industrial furnace operating in accordance with Subpart H of Part 266 of this chapter, or other thermal treatment unit operated in accordance with Subpart X, Part 264 of this chapter, or Subpart P, Part 265 of this chapter, but excluding for purposes of these debris treatment standards Thermal Desorption units.</p> <p>C. Immobilization Technologies:</p> <p>1. <i>Macroencapsulation</i>: 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>2. <i>Microencapsulation</i>: 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.<sup>5</sup></p> <p>3. <i>Sealing</i>: 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>Same as above .....</p> <p>Treated debris must be separated from treatment residuals using simple physical or mechanical means,<sup>9</sup> 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>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>Leachability of the hazardous contaminants must be reduced.</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>Same as above.</p> <p><i>Brick, Concrete, Glass, Metal, Pavement, Rock, Metal</i>: Metals other than mercury, except that there are no metal restrictions for vitrification.</p> <p><i>Debris contaminated with a dioxin-listed waste</i>.<sup>6</sup> Obtain an "Equivalent Technology" approval under § 268.42(b),<sup>8</sup> except that this requirement does not apply to vitrification.</p> <p>None.</p> <p>None.</p> <p>None.</p>

<sup>1</sup> Hazardous debris must be treated by either these standards or the waste-specific treatment standards for the waste contaminating the debris. The treatment standards must be met for each type of debris contained in a mixture of debris types, unless the debris is converted into treatment residue as a result of the treatment process. Debris treatment residuals are subject to the waste-specific treatment standards for the waste contaminating the debris.

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

<sup>3</sup> "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.

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

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

<sup>6</sup>Dioxin-listed wastes are EPA Hazardous Waste numbers FO20, FO21, FO22, FO23, FO26, and FO27.

<sup>7</sup>Thermal desorption is distinguished from Thermal Destruction in that the primary purpose of Thermal Desorption is to volatilize contaminants and to remove them from the treatment chamber for subsequent destruction or other treatment.

<sup>8</sup>The demonstration "Equivalent Technology" under § 268.42(b) must document that the technology treats contaminants subject to treatment to a level equivalent to that required by the performance and design and operating standards for other technologies in this table such that residual levels of hazardous contaminants will not pose a hazard to human health and the environment absent management controls.

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

[57 FR 37277, Aug. 18, 1992, as amended at 59 FR 48103, Sept. 19, 1994; 63 FR 28738, May 26, 1998]

EFFECTIVE DATE NOTE: At 63 FR 28738, May 26, 1998, § 268.45 was amended by revising the introductory text to paragraph (a), and paragraphs (d)(3) and (d)(4), effective Aug. 24, 1998. For the convenience of the user, the superseded text is set forth as follows:

**§ 268.45 Treatment standards for hazardous debris.**

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

\* \* \* \* \*

(d) \* \* \*

(3) *Cyanide-reactive debris.* Residue from the treatment of debris that is reactive because of cyanide must meet the standards for D003 under § 268.43.

(4) *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 § 261.21(a)(1)" under § 268.42.

\* \* \* \* \*

**§ 268.46 Alternative treatment standards based on HTMR.**

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

[59 FR 48103, Sept. 19, 1994]

**§ 268.48 Universal treatment standards.**

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

UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable			
REGULATED CONSTITUENT Common Name	CAS' Number	Wastewater Standard	Nonwastewater Standard
		Concentration in mg/l <sup>2</sup>	Concentration in mg/kg <sup>2</sup> unless noted as "mg/l TCLP"
<i>Organic Constituents</i>			
A2213 <sup>6</sup>	30558-43-1	0.042	1.4
Acenaphthylene	208-96-8	0.059	3.4
Acenaphthene	83-32-9	0.059	3.4
Acetone	67-64-1	0.28	160
Acetonitrile	75-05-8	5.6	38
Acetophenone	96-86-2	0.010	9.7
2-Acetylaminofluorene	53-96-3	0.059	140
Acrolein	107-02-8	0.29	NA
Acrylamide	79-06-1	19	23
Acrylonitrile	107-13-1	0.24	84
Aldicarb sulfone <sup>6</sup>	1646-88-4	0.056	0.28
Aldrin	309-00-2	0.021	0.066
4-Aminobiphenyl	92-67-1	0.13	NA
Aniline	62-53-3	0.81	14
Anthracene	120-12-7	0.059	3.4
Aramite	140-57-8	0.36	NA
alpha-BHC	319-84-6	0.00014	0.066
beta-BHC	319-85-7	0.00014	0.066
delta-BHC	319-86-8	0.023	0.066
gamma-BHC	58-89-9	0.0017	0.066
Barban <sup>6</sup>	101-27-9	0.056	1.4
Bendiocarb <sup>6</sup>	22781-23-3	0.056	1.4
Bendiocarb phenol <sup>6</sup>	22961-82-6	0.056	1.4

UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable			
REGULATED CONSTITUENT Common Name	CAS <sup>1</sup> Number	Wastewater Standard	Nonwastewater Standard
		Concentration in mg/l <sup>2</sup>	Concentration in mg/kg <sup>3</sup> unless noted as "mg/l TCLP"
Benomyl <sup>6</sup>	17804-35-2	0.056	1.4
Benzene	71-43-2	0.14	10
Benz(a)anthracene	56-55-3	0.059	3.4
Benzal chloride	98-87-3	0.055	6.0
Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene)	205-99-2	0.11	6.8
Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene)	207-08-9	0.11	6.8
Benzo(g,h,i)perylene	191-24-2	0.0055	1.8
Benzo(a)pyrene	50-32-8	0.061	3.4
Bromodichloromethane	75-27-4	0.35	15
Bromomethane/Methyl bromide	74-83-9	0.11	15
4-Bromophenyl phenyl ether	101-55-3	0.055	15
n-Butyl alcohol	71-36-3	5.6	2.6
Butylate <sup>6</sup>	2008-41-5	0.042	1.4
Butyl benzyl phthalate	85-68-7	0.017	28
2-sec-Butyl-4,6-dinitrophenol/Dinoseb	88-85-7	0.066	2.5
Carbaryl <sup>6</sup>	63-25-2	0.006	0.14
Carbenzadim <sup>6</sup>	10605-21-7	0.056	1.4
Carbofuran <sup>6</sup>	1563-66-2	0.006	0.14
Carbofuran phenol <sup>6</sup>	1563-38-8	0.056	1.4
Carbon disulfide	75-15-0	3.8	4.8 mg/l TCLP
Carbon tetrachloride	56-23-5	0.057	6.0
Carbosulfan <sup>6</sup>	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

UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable			
REGULATED CONSTITUENT Common Name	CAS <sup>1</sup> Number	Wastewater Standard	Nonwastewater Standard
		Concentration in mg/l <sup>2</sup>	Concentration in mg/kg <sup>3</sup> unless noted as "mg/l TCLP"
Chlorobenzene	108-90-7	0.057	6.0
Chlorobenzilate	510-15-6	0.10	NA
2-Chloro-1,3-butadiene	126-99-8	0.057	0.28
Chlorodibromomethane	124-48-1	0.057	15
Chloroethane	75-00-3	0.27	6.0
bis(2-Chloroethoxy)methane	111-91-1	0.036	7.2
bis(2-Chloroethyl)ether	111-44-4	0.033	6.0
Chloroform	67-66-3	0.046	6.0
bis(2-Chloroisopropyl)ether	39638-32-9	0.055	7.2
p-Chloro-m-cresol	59-50-7	0.018	14
2-Chloroethyl vinyl ether	110-75-8	0.062	NA
Chloromethane/Methyl chloride	74-87-3	0.19	30
2-Chloronaphthalene	91-58-7	0.055	5.6
2-Chlorophenol	95-57-8	0.044	5.7
3-Chloropropylene	107-05-1	0.036	30
Chrysene	218-01-9	0.059	3.4
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 <sup>6</sup>	64-00-6	0.056	1.4
Cyclohexanone	108-94-1	0.36	0.75 mg/l TCLP
o,p'-DDD	53-19-0	0.023	0.087
p,p'-DDD	72-54-8	0.023	0.087
o,p'-DDE	3424-82-6	0.031	0.087
p,p'-DDE	72-55-9	0.031	0.087



UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable			
REGULATED CONSTITUENT Common Name	CAS <sup>1</sup> Number	Wastewater Standard	Nonwastewater Standard
		Concentration in mg/l <sup>2</sup>	Concentration in mg/kg <sup>3</sup> unless noted as "mg/l TCLP"
o,p'-DDT	789-02-6	0.0039	0.087
p,p'-DDT	50-29-3	0.0039	0.087
Dibenz(a,h)anthracene	53-70-3	0.055	8.2
Dibenz(a,e)pyrene	192-65-4	0.061	NA
1,2-Dibromo-3-chloropropane	96-12-8	0.11	15
1,2-Dibromoethane/Ethylene dibromide	106-93-4	0.028	15
Dibromomethane	74-95-3	0.11	15
m-Dichlorobenzene	541-73-1	0.036	6.0
o-Dichlorobenzene	95-50-1	0.088	6.0
p-Dichlorobenzene	106-46-7	0.090	6.0
Dichlorodifluoromethane	75-71-8	0.23	7.2
1,1-Dichloroethane	75-34-3	0.059	6.0
1,2-Dichloroethane	107-06-2	0.21	6.0
1,1-Dichloroethylene	75-35-4	0.025	6.0
trans-1,2-Dichloroethylene	156-60-5	0.054	30
2,4-Dichlorophenol	120-83-2	0.044	14
2,6-Dichlorophenol	87-65-0	0.044	14
2,4-Dichlorophenoxyacetic acid/2,4-D	94-75-7	0.72	10
1,2-Dichloropropane	78-87-5	0.85	18
cis-1,3-Dichloropropylene	10061-01-5	0.036	18
trans-1,3-Dichloropropylene	10061-02-6	0.036	18
Dieldrin	60-57-1	0.017	0.13
Diethylene glycol, dicarbamate <sup>6</sup>	5952-26-1	0.056	1.4
Diethyl phthalate	84-66-2	0.20	28
p-Dimethylaminoazobenzene	60-11-7	0.13	NA

UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable			
REGULATED CONSTITUENT Common Name	CAS <sup>1</sup> Number	Wastewater Standard	Nonwastewater Standard
		Concentration in mg/l <sup>2</sup>	Concentration in mg/kg <sup>3</sup> unless noted as "mg/l TCLP"
2,4-Dimethyl phenol	105-67-9	0.036	14
Dimethyl phthalate	131-11-3	0.047	28
Dimetilan <sup>6</sup>	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
2,4-Dinitrophenol	51-28-5	0.12	160
2,4-Dinitrotoluene	121-14-2	0.32	140
2,6-Dinitrotoluene	606-20-2	0.55	28
Di-n-octyl phthalate	117-84-0	0.017	28
Di-n-propylnitrosamine	621-64-7	0.40	14
1,4-Dioxane	123-91-1	12.0	170
Diphenylamine (difficult to distinguish from diphenylnitrosamine)	122-39-4	0.92	13
Diphenylnitrosamine (difficult to distinguish from diphenylamine)	86-30-6	0.92	13
1,2-Diphenylhydrazine	122-66-7	0.087	NA
Disulfoton	298-04-4	0.017	6.2
Dithiocarbamates (total) <sup>6</sup>	NA	0.028	28
Endosulfan I	959-98-8	0.023	0.066
Endosulfan II	33213-65-9	0.029	0.13
Endosulfan sulfate	1031-07-8	0.029	0.13
Endrin	72-20-8	0.0028	0.13
Endrin aldehyde	7421-93-4	0.025	0.13
EPTC <sup>6</sup>	759-94-4	0.042	1.4
Ethyl acetate	141-78-6	0.34	33

UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable			
REGULATED CONSTITUENT Common Name	CAS <sup>1</sup> Number	Wastewater Standard	Nonwastewater Standard
		Concentration in mg/l <sup>2</sup>	Concentration in mg/kg <sup>3</sup> unless noted as "mg/l TCLP"
Ethyl benzene	100-41-4	0.057	10
Ethyl cyanide/Propanenitrile	107-12-0	0.24	360
Ethyl ether	60-29-7	0.12	160
bis(2-Ethylhexyl) phthalate	117-81-7	0.28	28
Ethyl methacrylate	97-63-2	0.14	160
Ethylene oxide	75-21-8	0.12	NA
Famphur	52-85-7	0.017	15
Fluoranthene	206-44-0	0.068	3.4
Fluorene	86-73-7	0.059	3.4
Formetanate hydrochloride <sup>6</sup>	23422-53-9	0.056	1.4
Formparanate <sup>6</sup>	17702-57-7	0.056	1.4
Heptachlor	76-44-8	0.0012	0.066
Heptachlor epoxide	1024-57-3	0.016	0.066
Hexachlorobenzene	118-74-1	0.055	10
Hexachlorobutadiene	87-68-3	0.055	5.6
Hexachlorocyclopentadiene	77-47-4	0.057	2.4
HxCDDs (All Hexachlorodibenzo-p-dioxins)	NA	0.000063	0.001
HxCDFs (All Hexachlorodibenzofurans)	NA	0.000063	0.001
Hexachloroethane	67-72-1	0.055	30
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
Isolan <sup>6</sup>	119-38-0	0.056	1.4

UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable			
REGULATED CONSTITUENT Common Name	CAS <sup>1</sup> Number	Wastewater Standard	Nonwastewater Standard
		Concentration in mg/l <sup>2</sup>	Concentration in mg/kg <sup>3</sup> unless noted as "mg/l TCLP"
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 <sup>6</sup>	2032-65-7	0.056	1.4
Methomyl <sup>6</sup>	16752-77-5	0.028	0.14
Methoxychlor	72-43-5	0.25	0.18
3-Methylcholanthrene	56-49-5	0.0055	15
4,4-Methylene bis(2-chloroaniline)	101-14-4	0.50	30
Methylene chloride	75-09-2	0.089	30
Methyl ethyl ketone	78-93-3	0.28	36
Methyl isobutyl ketone	108-10-1	0.14	33
Methyl methacrylate	80-62-6	0.14	160
Methyl methanesulfonate	66-27-3	0.018	NA
Methyl parathion	298-00-0	0.014	4.6
Metolcarb <sup>6</sup>	1129-41-5	0.056	1.4
Mexacarbate <sup>6</sup>	315-18-4	0.056	1.4
Molinate <sup>6</sup>	2212-67-1	0.042	1.4
Naphthalene	91-20-3	0.059	5.6
2-Naphthylamine	91-59-8	0.52	NA
o-Nitroaniline	88-74-4	0.27	14
p-Nitroaniline	100-01-6	0.028	28
Nitrobenzene	98-95-3	0.068	14
5-Nitro-o-toluidine	99-55-8	0.32	28

UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable			
REGULATED CONSTITUENT Common Name	CAS <sup>1</sup> Number	Wastewater Standard	Nonwastewater Standard
		Concentration in mg/l <sup>2</sup>	Concentration in mg/kg <sup>3</sup> unless noted as "mg/l TCLP"
o-Nitrophenol	88-75-5	0.028	13
p-Nitrophenol	100-02-7	0.12	29
N-Nitrosodiethylamine	55-18-5	0.40	28
N-Nitrosodimethylamine	62-75-9	0.40	2.3
N-Nitroso-di-n-butylamine	924-16-3	0.40	17
N-Nitrosomethylethylamine	10595-95-6	0.40	2.3
N-Nitrosomorpholine	59-89-2	0.40	2.3
N-Nitrosopiperidine	100-75-4	0.013	35
N-Nitrosopyrrolidine	930-55-2	0.013	35
Oxamyl <sup>6</sup>	23135-22-0	0.056	0.28
Parathion	56-38-2	0.014	4.6
Total PCBs (sum of all PCB isomers, or all Aroclors)	1336-36-3	0.10	10
Pebulate <sup>6</sup>	1114-71-2	0.042	1.4
Pentachlorobenzene	608-93-5	0.055	10
PeCDDs (All Pentachlorodibenzo-p-dioxins)	NA	0.000063	0.001
PeCDFs (All Pentachlorodibenzofurans)	NA	0.000035	0.001
Pentachloroethane	76-01-7	0.055	6.0
Pentachloronitrobenzene	82-68-8	0.055	4.8
Pentachlorophenol	87-86-5	0.089	7.4
Phenacetin	62-44-2	0.081	16
Phenanthrene	85-01-8	0.059	5.6
Phenol	108-95-2	0.039	6.2
o-Phenylenediamine <sup>6</sup>	95-54-5	0.056	5.6
Phorate	298-02-2	0.021	4.6
Phthalic acid	100-21-0	0.055	28

UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable			
REGULATED CONSTITUENT Common Name	CAS <sup>1</sup> Number	Wastewater Standard	Nonwastewater Standard
		Concentration in mg/l <sup>2</sup>	Concentration in mg/kg <sup>3</sup> unless noted as "mg/l TCLP"
Phthalic anhydride	85-44-9	0.055	28
Physostigmine <sup>6</sup>	57-47-6	0.056	1.4
Physostigmine salicylate <sup>6</sup>	57-64-7	0.056	1.4
Promecarb <sup>6</sup>	2631-37-0	0.056	1.4
Pronamide	23950-58-5	0.093	1.5
Propham <sup>6</sup>	122-42-9	0.056	1.4
Propoxur <sup>6</sup>	114-26-1	0.056	1.4
Prosulfocarb <sup>6</sup>	52888-80-9	0.042	1.4
Pyrene	129-00-0	0.067	8.2
Pyridine	110-86-1	0.014	16
Safrole	94-59-7	0.081	22
Silvex/2,4,5-TP	93-72-1	0.72	7.9
1,2,4,5-Tetrachlorobenzene	95-94-3	0.055	14
TCDDs (All Tetrachlorodibenzo-p-dioxins)	NA	0.000063	0.001
TCDFs (All Tetrachlorodibenzofurans)	NA	0.000063	0.001
1,1,1,2-Tetrachloroethane	630-20-6	0.057	6.0
1,1,2,2-Tetrachloroethane	79-34-5	0.057	6.0
Tetrachloroethylene	127-18-4	0.056	6.0
2,3,4,6-Tetrachlorophenol	58-90-2	0.030	7.4
Thiodicarb <sup>6</sup>	59669-26-0	0.019	1.4
Thiophanate-methyl <sup>6</sup>	23564-05-8	0.056	1.4
Tirpate <sup>6</sup>	26419-73-8	0.056	0.28
Toluene	108-88-3	0.080	10
Toxaphene	8001-35-2	0.0095	2.6
Triallate <sup>6</sup>	2303-17-5	0.042	1.4

UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable			
REGULATED CONSTITUENT Common Name	CAS <sup>1</sup> Number	Wastewater Standard	Nonwastewater Standard
		Concentration in mg/l <sup>2</sup>	Concentration in mg/kg <sup>3</sup> unless noted as "mg/l TCLP"
Tribromomethane/Bromoform	75-25-2	0.63	15
2,4,6-Tribromophenol	118-79-6	0.035	7.4
1,2,4-Trichlorobenzene	120-82-1	0.055	19
1,1,1-Trichloroethane	71-55-6	0.054	6.0
1,1,2-Trichloroethane	79-00-5	0.054	6.0
Trichloroethylene	79-01-6	0.054	6.0
Trichloromonofluoromethane	75-69-4	0.020	30
2,4,5-Trichlorophenol	95-95-4	0.18	7.4
2,4,6-Trichlorophenol	88-06-2	0.035	7.4
2,4,5-Trichlorophenoxyacetic acid/2,4,5-T	93-76-5	0.72	7.9
1,2,3-Trichloropropane	96-18-4	0.85	30
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.057	30
Triethylamine <sup>6</sup>	101-44-8	0.081	1.5
tris-(2,3-Dibromopropyl) phosphate	126-72-7	0.11	0.10
Vernolate <sup>6</sup>	1929-77-7	0.042	1.4
Vinyl chloride	75-01-4	0.27	6.0
Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations)	1330-20-7	0.32	30
<i>Inorganic Constituents</i>			
Antimony	7440-36-0	1.9	1.15 mg/l TCLP
Arsenic	7440-38-2	1.4	5.0 mg/l TCLP
Barium	7440-39-3	1.2	21 mg/l TCLP
Beryllium	7440-41-7	0.82	1.22 mg/l TCLP
Cadmium	7440-43-9	0.69	0.11 mg/l TCLP
Chromium (Total)	7440-47-3	2.77	0.60 mg/l TCLP
Cyanides (Total) <sup>4</sup>	57-12-5	1.2	590

UNIVERSAL TREATMENT STANDARDS NOTE: NA means not applicable			
REGULATED CONSTITUENT Common Name	CAS <sup>1</sup> Number	Wastewater Standard	Nonwastewater Standard
		Concentration in mg/l <sup>2</sup>	Concentration in mg/kg <sup>3</sup> unless noted as "mg/l TCLP"
Cyanides (Amenable) <sup>4</sup>	57-12-5	0.86	30
Fluoride <sup>5</sup>	16984-48-8	35	NA
Lead	7439-92-1	0.69	0.75 mg/l TCLP
Mercury - Nonwastewater from Retort	7439-97-6	NA	0.20 mg/l TCLP
Mercury - All Others	7439-97-6	0.15	0.025 mg/l TCLP
Nickel	7440-02-0	3.98	11 mg/l TCLP
Selenium <sup>7</sup>	7782-49-2	0.82	5.7 mg/l TCLP
Silver	7440-22-4	0.43	0.14 mg/l TCLP
Sulfide <sup>5</sup>	18496-25-8	14	NA
Thallium	7440-28-0	1.4	0.20 mg/l TCLP
Vanadium <sup>5</sup>	7440-62-2	4.3	1.6 mg/l TCLP
Zinc <sup>5</sup>	7440-66-6	2.61	4.3 mg/l TCLP



FOOTNOTES TO TABLE UTS

- 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.<sup>44</sup>
- 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 40 CFR part 264, subpart O or 40 CFR part 265, subpart O, or based upon combustion in fuel substitution units operating in accordance with applicable technical requirements. A facility may comply with these treatment standards according to provisions in 40 CFR 268.40(d). 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 40 CFR 260.11, 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 §268.2(i).
- 6 Between August 26, 1996, and August 26, 1997, these constituents are not "underlying hazardous constituents" as defined at §268.2(i) of this part.
- 7 This constituent is not an underlying hazardous constituent as defined at §268.2(i) of this part because its UTS level is greater than its TC level, thus a treated selenium waste would always be characteristically hazardous, unless it is treated to below its characteristic level.

(b) [Reserved]

[59 FR 48103, Sept. 19, 1994, as amended by 60 FR 302, Jan. 3, 1995; 61 FR 15654, Apr. 8, 1996; 61 FR 33690, June 28, 1996; 62 FR 7596, Feb. 19, 1997; 63 FR 28739, May 26, 1998]

EFFECTIVE DATE NOTE: At 63 FR 28739, May 26, 1998, §268.48 was amended by revising the Universal Treatment Standards table, effective Aug. 24, 1998, with the exception of the table entry for 2,4,6-Tribromophenol, which is effective Nov. 4, 1998. The superseded text of the table remaining in effect until Aug. 24, 1998, appears in the July 1, 1997, revision of 40 CFR parts 266 to 299.

**§268.49 Alternative LDR treatment standards for contaminated soil.**

(a) Applicability. You must comply with LDRs prior to placing soil that

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

If LDRs	And if LDRs	And if	Then you
Applied to the listed waste when it contaminated the soil*.	Apply to the listed waste now.	.....	Must comply with LDRs

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

\* For dates of LDR applicability, see 40 CFR Part 268 Appendix VII. To determine the date any given listed hazardous waste contaminated any given volume of soil, use the last date any given listed hazardous waste was placed into any given land disposal unit or, in the case of an accidental spill, the date of the spill.

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

(c) Treatment standards for contaminated soils. Prior to land disposal, contaminated soil identified by paragraph (a) of this section as needing to comply with LDRs must be treated according to all the standards specified in this paragraph or according to the Universal Treatment Standards specified in 40 CFR 268.48.

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

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

(B) For metals, treatment must achieve 90 percent reduction in constituent concentrations as measured in leachate from the treated media (tested according to the TCLP) or 90 percent reduction in total constituent concentrations (when a metal removal treatment technology is used), except as provided by paragraph (c)(1)(C) of this section.

(C) When treatment of any constituent subject to treatment to a 90 percent reduction standard would result in a concentration less than 10 times the Universal Treatment Standard for that constituent, treatment to achieve constituent concentrations less than 10 times the universal treatment standard is not required. Universal Treatment Standards are identified in 40 CFR 268.48 Table UTS.

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

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

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

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

(d) Constituents subject to treatment. When applying the soil treatment standards in paragraph (c) of this section, constituents subject to treatment are any constituents listed in 40 CFR 268.48, Table UTS—Universal Treatment Standards that are reasonably expected to be present in any

given volume of contaminated soil, except fluoride, selenium, sulfides, vanadium and zinc, and are present at concentrations greater than ten times the universal treatment standard.

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

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

(2) Non-soil residuals are subject to:

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

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

[63 FR 28751, May 26, 1998]

EFFECTIVE DATE NOTE: At 63 FR 28751, May 26, 1998, § 268.49 was added, effective Aug. 24, 1998.

## Subpart E—Prohibitions on Storage

### § 268.50 Prohibitions on storage of restricted wastes.

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

(1) A generator stores such wastes in tanks, containers, or containment buildings on-site solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment, or disposal and the generator complies with the requirements in § 262.34 and parts 264 and 265 of this chapter.

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

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

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

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

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

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

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

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

(f) Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal

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

[51 FR 40642, Nov. 7, 1986; 52 FR 21017, June 4, 1987, as amended at 52 FR 25791, July 8, 1987; 54 FR 36972, Sept. 6, 1989; 57 FR 37281, Aug. 18, 1992]

APPENDIX I TO PART 268 [RESERVED]

APPENDIX II [RESERVED]

APPENDIX III TO PART 268 [RESERVED]

APPENDIX IV TO PART 268—WASTES EXCLUDED FROM LAB PACKS UNDER THE ALTERNATIVE TREATMENT STANDARDS OF §268.42(c)

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

[59 FR 48107 Sept. 19, 1994]

APPENDIX V TO PART 268 [RESERVED]

APPENDIX VI TO PART 268—RECOMMENDED TECHNOLOGIES TO ACHIEVE DEACTIVATION OF CHARACTERISTICS IN SECTION 268.42

The treatment standard for many characteristic wastes is stated in the §268.40 Table of Treatment Standards as “Deactivation and meet UTS.” EPA has determined that many technologies, when used alone or in combination, can achieve the deactivation portion of the treatment standard. Characteristic wastes that are not managed in a facility regulated by the Clean Water Act (CWA) or in a CWA-equivalent facility, and that also contain underlying hazardous constituents (see §268.2(i)) must be treated not only by a “deactivating” technology to remove the characteristic, but also to achieve the universal treatment standards (UTS) for underlying hazardous constituents. The following appendix presents a partial list of technologies, utilizing the five letter technology codes established in 40 CFR 268.42 Table 1, that may be useful in meeting the treatment standard. Use of these specific technologies is not mandatory and does not preclude direct reuse, recovery, and/or the use of other pretreatment technologies, provided deactivation is achieved and underlying hazardous constituents are treated to achieve the UTS.

Waste code/subcategory	Nonwastewaters	Wastewaters
D001 Ignitable Liquids based on 261.21(a)(1)—Low TOC Nonwastewater Subcategory (containing 1% to <10% TOC)	RORGS INCIN WETOX CHOXD BIODG n.a.	n.a.
D001 Ignitable Liquids based on 261.21(a)(1)—Ignitable Wastewater Subcategory (containing <1% TOC)	RORGS INCIN WETOX CHOXD BIODG n.a.	RORGS INCIN WETOX CHOXD BIODG n.a.
D001 Compressed Gases based on 261.21(A)(3)	RGAS INCIN FSUBS ADGAS fb. INCIN ADGAS fb. (CHOXD; or CHRED) WTRRX CHOXD CHRED STABL INCIN	n.a.
D001 Ignitable Reactives based on 261.21(a)(2)	CHRED INCIN RCORR NEUTR INCIN	CHRED INCIN NEUTR INCIN
D001 Ignitable Oxidizers based on 261.21(a)(4)	NEUTR INCIN	NEUTR INCIN
D002 Acid Subcategory based on 261.22(a)(1) with pH less than or equal to 2	CHOXD CHRED INCIN STABL WTRRX CHOXD CHRED INCIN	CHOXD CHRED INCIN
D002 Alkaline Subcategory based on 261.22(a)(1) with pH greater than or equal to 12.5	CHOXD CHRED INCIN STABL WTRRX CHOXD CHRED INCIN	CHOXD CHRED INCIN
D002 Other Corrosives based on 261.22(a)(2)	CHOXD CHRED INCIN STABL WTRRX CHOXD CHRED INCIN	n.a.
D003 Water Reactives based on 261.23(a) (2), (3), and (4)	CHOXD CHRED INCIN STABL WTRRX CHOXD CHRED INCIN	CHOXD CHRED INCIN
D003 Reactive Sulfides based on 261.23(a)(5)	CHOXD CHRED INCIN STABL WTRRX CHOXD CHRED INCIN	CHOXD CHRED BIODG INCIN INCIN
D003 Explosives based on 261.23(a) (6), (7), and (8)	CHOXD CHRED INCIN STABL WTRRX CHOXD CHRED INCIN	CHOXD CHRED BIODG CARBN

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

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

[55 FR 22714, June 1, 1990, as amended at 62 FR 26025, May 12, 1997]

APPENDIX VII TO PART 268—LDR EFFECTIVE DATES OF SURFACE DISPOSED  
PROHIBITED HAZARDOUS WASTESTABLE 1.—EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED  
IN THE LDRS<sup>a</sup>—COMPREHENSIVE LIST

Waste code	Waste category	Effective date
D001 <sup>c</sup> .....	All (except High TOC Ignitable Liquids) .....	Aug. 9, 1993.
D001 .....	High TOC Ignitable Liquids .....	Aug. 8, 1990.
D002 <sup>c</sup> .....	All .....	Aug. 9, 1993.
D003 .....	Newly identified surface-disposed elemental phosphorus processing wastes.	May 26, 2000.
D004 .....	Newly identified D004 and mineral processing wastes .....	Aug. 24, 1998.
D004 .....	Mixed radioactive/newly identified D004 or mineral processing wastes.	May 26, 2000.
D005 .....	Newly identified D005 and mineral processing wastes .....	Aug. 24, 1998.
D005 .....	Mixed radioactive/newly identified D005 or mineral processing wastes.	May 26, 2000.
D006 .....	Newly identified D006 and mineral processing wastes .....	Aug. 24, 1998.
D006 .....	Mixed radioactive/newly identified D006 or mineral processing wastes.	May 26, 2000.
D007 .....	Newly identified D007 and mineral processing wastes .....	Aug. 24, 1998.
D007 .....	Mixed radioactive/newly identified D007 or mineral processing wastes.	May 26, 2000.
D008 .....	Newly identified D008 and mineral processing waste .....	Aug. 24, 1998.
D008 .....	Mixed radioactive/newly identified D008 or mineral processing wastes.	May 26, 2000.
D009 .....	Newly identified D009 and mineral processing waste .....	Aug. 24, 1998.
D009 .....	Mixed radioactive/newly identified D009 or mineral processing wastes.	May 26, 2000.
D010 .....	Newly identified D010 and mineral processing wastes .....	Aug. 24, 1998.
D010 .....	Mixed radioactive/newly identified D010 or mineral processing wastes.	May 26, 2000.
D011 .....	Newly identified D011 and mineral processing wastes .....	Aug. 24, 1998.
D011 .....	Mixed radioactive/newly identified D011 or mineral processing wastes.	May 26, 2000.
D012 (that exhibit the toxicity characteristic based on the TCLP) <sup>d</sup> .	All .....	Dec. 14, 1994.
D013 (that exhibit the toxicity characteristic based on the TCLP) <sup>d</sup> .	All .....	Dec. 14, 1994.
D014 (that exhibit the toxicity characteristic based on the TCLP) <sup>d</sup> .	All .....	Dec. 14, 1994.
D015 (that exhibit the toxicity characteristic based on the TCLP) <sup>d</sup> .	All .....	Dec. 14, 1994.
D016 (that exhibit the toxicity characteristic based on the TCLP) <sup>d</sup> .	All .....	Dec. 14, 1994.
D017 (that exhibit the toxicity characteristic based on the TCLP) <sup>d</sup> .	All .....	Dec. 14, 1994.
D018 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D018 .....	All others .....	Dec. 19, 1994.
D019 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D019 .....	All others .....	Dec. 19, 1994.
D020 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D020 .....	All others .....	Dec. 19, 1994.
D021 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D021 .....	All others .....	Dec. 19, 1994.
D022 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D022 .....	All others .....	Dec. 19, 1994.
D023 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D023 .....	All others .....	Dec. 19, 1994.
D024 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D024 .....	All others .....	Dec. 19, 1994.
D025 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D025 .....	All others .....	Dec. 19, 1994.
D026 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D026 .....	All others .....	Dec. 19, 1994.
D027 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D027 .....	All others .....	Dec. 19, 1994.
D028 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D028 .....	All others .....	Dec. 19, 1994.
D029 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D029 .....	All others .....	Dec. 19, 1994.
D030 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D030 .....	All others .....	Dec. 19, 1994.

TABLE 1.—EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED IN THE LDRS <sup>a</sup>—COMPREHENSIVE LIST—Continued

Waste code	Waste category	Effective date
D031 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D031 .....	All others .....	Dec. 19, 1994.
D032 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D032 .....	All others .....	Dec. 19, 1994.
D033 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D033 .....	All others .....	Dec. 19, 1994.
D034 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D034 .....	All others .....	Dec. 19, 1994.
D035 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D035 .....	All others .....	Dec. 19, 1994.
D036 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D036 .....	All others .....	Dec. 19, 1994.
D037 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D037 .....	All others .....	Dec. 19, 1994.
D038 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D038 .....	All others .....	Dec. 19, 1994.
D039 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D039 .....	All others .....	Dec. 19, 1994.
D040 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D040 .....	All others .....	Dec. 19, 1994.
D041 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D041 .....	All others .....	Dec. 19, 1994.
D042 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D042 .....	All others .....	Dec. 19, 1994.
D043 .....	Mixed with radioactive wastes .....	Sept. 19, 1996.
D043 .....	All others .....	Dec. 19, 1994.
F001 .....	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	Nov. 8, 1988.
F001 .....	All others .....	Nov. 8, 1986.
F002 (1,1,2-trichloroethane) .....	Wastewater and Nonwastewater .....	Aug. 8, 1990.
F002 .....	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	Nov. 8, 1988.
F002 .....	All others .....	Nov. 8, 1986.
F003 .....	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, solvent-containing sludges and solids.	Nov. 8, 1988.
F003 .....	All others .....	Nov. 8, 1986.
F004 .....	Small quantity generators, CERCLA response/RCRA corrective action, initial generator's solvent-water mixtures, 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.
F011 .....	All others .....	July 8, 1989.
F012 (cyanides) .....	Nonwastewater .....	Dec. 8, 1989.
F012 .....	All others .....	July 8, 1989.
F019 .....	All .....	Aug. 8, 1990.
F020 .....	All .....	Nov. 8, 1988.
F021 .....	All .....	Nov. 8, 1988.
F025 .....	All .....	Aug. 8, 1990.
F026 .....	All .....	Nov. 8, 1988.
F027 .....	All .....	Nov. 8, 1988.
F028 .....	All .....	Nov. 8, 1988.
F032 .....	Mixed with radioactive wastes .....	May 12, 1999
F032 .....	All others .....	Aug. 12, 1997.
F033 .....	Mixed with radioactive wastes .....	May 12, 1999
F033 .....	All others .....	May 12, 1997



TABLE 1.—EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED IN THE LDERS <sup>a</sup>—COMPREHENSIVE LIST—Continued

Waste code	Waste category	Effective date
F034 .....	Mixed with radioactive wastes .....	May 12, 1999
F034 .....	All others .....	Aug. 12, 1997.
F035 .....	Mixed with radioactive wastes .....	May 12, 1999.
F035 .....	All others .....	Aug. 12, 1997.
F037 .....	Not generated from surface impoundment cleanouts or closures.	June 30, 1993.
F037 .....	Generated from surface impoundment cleanouts or closures	June 30, 1994.
F037 .....	Mixed with radioactive wastes .....	June 30, 1994.
F038 .....	Not generated from surface impoundment cleanouts or closures.	June 30, 1993.
F038 .....	Generated from surface impoundment cleanouts or closures	June 30, 1994.
F038 .....	Mixed with radioactive wastes .....	June 30, 1994.
F039 .....	Wastewater .....	Aug. 8, 1990.
F039 .....	Nonwastewater .....	May 8, 1992.
K001 (organics) <sup>b</sup> .....	All .....	Aug. 8, 1988.
K001 .....	All others .....	Aug. 8, 1988.
K002 .....	All .....	Aug. 8, 1990.
K003 .....	All .....	Aug. 8, 1990.
K004 .....	Wastewater .....	Aug. 8, 1990.
K004 .....	Nonwastewater .....	Aug. 8, 1988.
K005 .....	Wastewater .....	Aug. 8, 1990.
K005 .....	Nonwastewater .....	June 8, 1989.
K006 .....	All .....	Aug. 8, 1990.
K007 .....	Wastewater .....	Aug. 8, 1990.
K007 .....	Nonwastewater .....	June 8, 1989.
K008 .....	Wastewater .....	Aug. 8, 1990.
K008 .....	Nonwastewater .....	Aug. 8, 1988.
K009 .....	All .....	June 8, 1989.
K010 .....	All .....	June 8, 1989.
K011 .....	Wastewater .....	Aug. 8, 1990.
K011 .....	Nonwastewater .....	June 8, 1989.
K013 .....	Wastewater .....	Aug. 8, 1990.
K013 .....	Nonwastewater .....	June 8, 1989.
K014 .....	Wastewater .....	Aug. 8, 1990.
K014 .....	Nonwastewater .....	June 8, 1989.
K015 .....	Wastewater .....	Aug. 8, 1988.
K015 .....	Nonwastewater .....	Aug. 8, 1990.
K016 .....	All .....	Aug. 8, 1988.
K017 .....	All .....	Aug. 8, 1990.
K018 .....	All .....	Aug. 8, 1988.
K019 .....	All .....	Aug. 8, 1988.
K020 .....	All .....	Aug. 8, 1988.
K021 .....	Wastewater .....	Aug. 8, 1990.
K021 .....	Nonwastewater .....	Aug. 8, 1988.
K022 .....	Wastewater .....	Aug. 8, 1990.
K022 .....	Nonwastewater .....	Aug. 8, 1988.
K023 .....	All .....	June 8, 1989.
K024 .....	All .....	Aug. 8, 1988.
K025 .....	Wastewater .....	Aug. 8, 1990.
K025 .....	Nonwastewater .....	Aug. 8, 1988.
K026 .....	All .....	Aug. 8, 1990.
K027 .....	All .....	June 8, 1989.
K028 (metals) .....	Nonwastewater .....	Aug. 8, 1990.
K028 .....	All others .....	June 8, 1989.
K029 .....	Wastewater .....	Aug. 8, 1990.
K029 .....	Nonwastewater .....	June 8, 1989.
K030 .....	All .....	Aug. 8, 1988.
K031 .....	Wastewater .....	Aug. 8, 1990.
K031 .....	Nonwastewater .....	May 8, 1992.
K032 .....	All .....	Aug. 8, 1990.
K033 .....	All .....	Aug. 8, 1990.
K034 .....	All .....	Aug. 8, 1990.
K035 .....	All .....	Aug. 8, 1990.
K036 .....	Wastewater .....	June 8, 1989.
K036 .....	Nonwastewater .....	Aug. 8, 1988.
K037 <sup>b</sup> .....	Wastewater .....	Aug. 8, 1988.
K037 .....	Nonwastewater .....	Aug. 8, 1988.
K038 .....	All .....	June 8, 1989.
K039 .....	All .....	June 8, 1989.
K040 .....	All .....	June 8, 1989.
K041 .....	All .....	Aug. 8, 1990.

TABLE 1.—EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED  
IN THE LDERS <sup>a</sup>—COMPREHENSIVE LIST—Continued

Waste code	Waste category	Effective date
K042 .....	All .....	Aug. 8, 1990.
K043 .....	All .....	June 8, 1989.
K044 .....	All .....	Aug. 8, 1988.
K045 .....	All .....	Aug. 8, 1988.
K046 (Nonreactive) .....	Nonwastewater .....	Aug. 8, 1988.
K046 .....	All others .....	Aug. 8, 1990.
K047 .....	All .....	Aug. 8, 1988.
K048 .....	Wastewater .....	Aug. 8, 1990.
K048 .....	Nonwastewater .....	Nov. 8, 1990.
K049 .....	Wastewater .....	Aug. 8, 1990.
K049 .....	Nonwastewater .....	Nov. 8, 1990.
K050 .....	Wastewater .....	Aug. 8, 1990.
K050 .....	Nonwastewater .....	Nov. 8, 1990.
K051 .....	Wastewater .....	Aug. 8, 1990.
K051 .....	Nonwastewater .....	Nov. 8, 1990.
K052 .....	Wastewater .....	Aug. 8, 1990.
K052 .....	Nonwastewater .....	Nov. 8, 1990.
K060 .....	Wastewater .....	Aug. 8, 1990.
K060 .....	Nonwastewater .....	Aug. 8, 1988.
K061 .....	Wastewater .....	Aug. 8, 1990.
K061 .....	Nonwastewater .....	June 30, 1992.
K062 .....	All .....	Aug. 8, 1988.
K069 (Non-Calcium Sulfate) .....	Nonwastewater .....	Aug. 8, 1988.
K069 .....	All others .....	Aug. 8, 1990.
K071 .....	All .....	Aug. 8, 1990.
K073 .....	All .....	Aug. 8, 1990.
K083 .....	All .....	Aug. 8, 1990.
K084 .....	Wastewater .....	Aug. 8, 1990.
K084 .....	Nonwastewater .....	May 8, 1992.
K085 .....	All .....	Aug. 8, 1990.
K086 (organics) <sup>b</sup> .....	All .....	Aug. 8, 1988.
K086 .....	All others .....	Aug. 8, 1988.
K087 .....	All .....	Aug. 8, 1988.
K088 .....	All others .....	Oct. 8, 1997.
K088 .....	All others .....	Jan. 8, 1997.
K093 .....	All .....	June 8, 1989.
K094 .....	All .....	June 8, 1989.
K095 .....	Wastewater .....	Aug. 8, 1990.
K095 .....	Nonwastewater .....	June 8, 1989.
K096 .....	Wastewater .....	Aug. 8, 1990.
K096 .....	Nonwastewater .....	June 8, 1989.
K097 .....	All .....	Aug. 8, 1990.
K098 .....	All .....	Aug. 8, 1990.
K099 .....	All .....	Aug. 8, 1988.
K100 .....	Wastewater .....	Aug. 8, 1990.
K100 .....	Nonwastewater .....	Aug. 8, 1988.
K101 (organics) .....	Wastewater .....	Aug. 8, 1988.
K101 (metals) .....	Wastewater .....	Aug. 8, 1990.
K101 (organics) .....	Nonwastewater .....	Aug. 8, 1988.
K101 (metals) .....	Nonwastewater .....	May 8, 1992.
K102 (organics) .....	Wastewater .....	Aug. 8, 1988.
K102 (metals) .....	Wastewater .....	Aug. 8, 1990.
K102 (organics) .....	Nonwastewater .....	Aug. 8, 1988.
K102 (metals) .....	Nonwastewater .....	May 8, 1992.
K103 .....	All .....	Aug. 8, 1988.
K104 .....	All .....	Aug. 8, 1988.
K105 .....	All .....	Aug. 8, 1990.
K106 .....	Wastewater .....	Aug. 8, 1990.
K106 .....	Nonwastewater .....	May 8, 1992.
K107 .....	Mixed with radioactive wastes .....	June 30, 1994.
K107 .....	All others .....	Nov. 9, 1992.
K108 .....	Mixed with radioactive wastes .....	June 30, 1994.
K108 .....	All others .....	Nov. 9, 1992.
K109 .....	Mixed with radioactive wastes .....	June 30, 1994.
K109 .....	All others .....	Nov. 9, 1992.
K110 .....	Mixed with radioactive wastes .....	June 30, 1994.
K110 .....	All others .....	Nov. 9, 1992.
K111 .....	Mixed with radioactive wastes .....	June 30, 1994.
K111 .....	All others .....	Nov. 9, 1992.
K112 .....	Mixed with radioactive wastes .....	June 30, 1994.
K112 .....	All others .....	Nov. 9, 1992.

TABLE 1.—EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED IN THE LDRS <sup>a</sup>—COMPREHENSIVE LIST—Continued

Waste code	Waste category	Effective date
K113 .....	All .....	June 8, 1989.
K114 .....	All .....	June 8, 1989.
K115 .....	All .....	June 8, 1989.
K116 .....	All .....	June 8, 1989.
K117 .....	Mixed with radioactive wastes .....	June 30, 1994.
K117 .....	All others .....	Nov. 9, 1992.
K118 .....	Mixed with radioactive wastes .....	June 30, 1994.
K118 .....	All others .....	Nov. 9, 1992.
K123 .....	Mixed with radioactive wastes .....	June 30, 1994.
K123 .....	All others .....	Nov. 9, 1992.
K124 .....	Mixed with radioactive wastes .....	June 30, 1994.
K124 .....	All others .....	Nov. 9, 1992.
K125 .....	Mixed with radioactive wastes .....	June 30, 1994.
K125 .....	All others .....	Nov. 9, 1992.
K126 .....	Mixed with radioactive wastes .....	June 30, 1994.
K126 .....	All others .....	Nov. 9, 1992.
K131 .....	Mixed with radioactive wastes .....	June 30, 1994.
K131 .....	All others .....	Nov. 9, 1992.
K132 .....	Mixed with radioactive wastes .....	June 30, 1994.
K132 .....	All others .....	Nov. 9, 1992.
K136 .....	Mixed with radioactive wastes .....	June 30, 1994.
K136 .....	All others .....	Nov. 9, 1992.
K141 .....	Mixed with radioactive wastes .....	Sep. 19, 1996.
K141 .....	All others .....	Dec. 19, 1994.
K142 .....	Mixed with radioactive wastes .....	Sep. 19, 1996.
K142 .....	All others .....	Dec. 19, 1994.
K143 .....	Mixed with radioactive wastes .....	Sep. 19, 1996.
K143 .....	All others .....	Dec. 19, 1994.
K144 .....	Mixed with radioactive wastes .....	Sep. 19, 1996.
K144 .....	All others .....	Dec. 19, 1994.
K145 .....	Mixed with radioactive wastes .....	Sep. 19, 1996.
K145 .....	All others .....	Dec. 19, 1994.
K147 .....	Mixed with radioactive wastes .....	Sep. 19, 1996.
K147 .....	All others .....	Dec. 19, 1994.
K148 .....	Mixed with radioactive wastes .....	Sep. 19, 1996.
K148 .....	All others .....	Dec. 19, 1994.
K149 .....	Mixed with radioactive wastes .....	Sep. 19, 1996.
K149 .....	All others .....	Dec. 19, 1994.
K150 .....	Mixed with radioactive wastes .....	Sep. 19, 1996.
K150 .....	All others .....	Dec. 19, 1994.
K151 .....	Mixed with radioactive wastes .....	Sep. 19, 1996.
K151 .....	All others .....	Dec. 19, 1994.
K156 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
K156 .....	All others .....	July 8, 1996.
K157 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
K157 .....	All others .....	July 8, 1996.
K158 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
K158 .....	All others .....	July 8, 1996.
K159 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
K159 .....	All others .....	July 8, 1996.
K160 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
K160 .....	All others .....	July 8, 1996.
K161 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
K161 .....	All others .....	July 8, 1996.
P001 .....	All .....	Aug. 8, 1990.
P002 .....	All .....	Aug. 8, 1990.
P003 .....	All .....	Aug. 8, 1990.
P004 .....	All .....	Aug. 8, 1990.
P005 .....	All .....	Aug. 8, 1990.
P006 .....	All .....	Aug. 8, 1990.
P007 .....	All .....	Aug. 8, 1990.
P008 .....	All .....	Aug. 8, 1990.
P009 .....	All .....	Aug. 8, 1990.
P010 .....	Wastewater .....	Aug. 8, 1990.
P010 .....	Nonwastewater .....	May 8, 1992.
P011 .....	Wastewater .....	Aug. 8, 1990.
P011 .....	Nonwastewater .....	May 8, 1992.
P012 .....	Wastewater .....	Aug. 8, 1990.
P012 .....	Nonwastewater .....	May 8, 1992.
P013 (barium) .....	Nonwastewater .....	Aug. 8, 1990.
P013 .....	All others .....	June 8, 1989.

TABLE 1.—EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED IN THE LDRS <sup>a</sup>—COMPREHENSIVE LIST—Continued

Waste code	Waste category	Effective date
P014 .....	All .....	Aug. 8, 1990.
P015 .....	All .....	Aug. 8, 1990.
P016 .....	All .....	Aug. 8, 1990.
P017 .....	All .....	Aug. 8, 1990.
P018 .....	All .....	Aug. 8, 1990.
P020 .....	All .....	Aug. 8, 1990.
P021 .....	All .....	June 8, 1989.
P022 .....	All .....	Aug. 8, 1990.
P023 .....	All .....	Aug. 8, 1990.
P024 .....	All .....	Aug. 8, 1990.
P026 .....	All .....	Aug. 8, 1990.
P027 .....	All .....	Aug. 8, 1990.
P028 .....	All .....	Aug. 8, 1990.
P029 .....	All .....	June 8, 1989.
P030 .....	All .....	June 8, 1989.
P031 .....	All .....	Aug. 8, 1990.
P033 .....	All .....	Aug. 8, 1990.
P034 .....	All .....	Aug. 8, 1990.
P036 .....	Wastewater .....	Aug. 8, 1990.
P036 .....	Nonwastewater .....	May 8, 1992.
P037 .....	All .....	Aug. 8, 1990.
P038 .....	Wastewater .....	Aug. 8, 1990.
P038 .....	Nonwastewater .....	May 8, 1992.
P039 .....	All .....	June 8, 1989.
P040 .....	All .....	June 8, 1989.
P041 .....	All .....	June 8, 1989.
P042 .....	All .....	Aug. 8, 1990.
P043 .....	All .....	June 8, 1989.
P044 .....	All .....	June 8, 1989.
P045 .....	All .....	Aug. 8, 1990.
P046 .....	All .....	Aug. 8, 1990.
P047 .....	All .....	Aug. 8, 1990.
P048 .....	All .....	Aug. 8, 1990.
P049 .....	All .....	Aug. 8, 1990.
P050 .....	All .....	Aug. 8, 1990.
P051 .....	All .....	Aug. 8, 1990.
P054 .....	All .....	Aug. 8, 1990.
P056 .....	All .....	Aug. 8, 1990.
P057 .....	All .....	Aug. 8, 1990.
P058 .....	All .....	Aug. 8, 1990.
P059 .....	All .....	Aug. 8, 1990.
P060 .....	All .....	Aug. 8, 1990.
P062 .....	All .....	June 8, 1989.
P063 .....	All .....	June 8, 1989.
P064 .....	All .....	Aug. 8, 1990.
P065 .....	Wastewater .....	Aug. 8, 1990.
P065 .....	Nonwastewater .....	May 8, 1992.
P066 .....	All .....	Aug. 8, 1990.
P067 .....	All .....	Aug. 8, 1990.
P068 .....	All .....	Aug. 8, 1990.
P069 .....	All .....	Aug. 8, 1990.
P070 .....	All .....	Aug. 8, 1990.
P071 .....	All .....	June 8, 1989.
P072 .....	All .....	Aug. 8, 1990.
P073 .....	All .....	Aug. 8, 1990.
P074 .....	All .....	June 8, 1989.
P075 .....	All .....	Aug. 8, 1990.
P076 .....	All .....	Aug. 8, 1990.
P077 .....	All .....	Aug. 8, 1990.
P078 .....	All .....	Aug. 8, 1990.
P081 .....	All .....	Aug. 8, 1990.
P082 .....	All .....	Aug. 8, 1990.
P084 .....	All .....	Aug. 8, 1990.
P085 .....	All .....	June 8, 1989.
P087 .....	All .....	May 8, 1992.
P088 .....	All .....	Aug. 8, 1990.
P089 .....	All .....	June 8, 1989.
P092 .....	Wastewater .....	Aug. 8, 1990.
P092 .....	Nonwastewater .....	May 8, 1992.
P093 .....	All .....	Aug. 8, 1990.
P094 .....	All .....	June 8, 1989.

TABLE 1.—EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED IN THE LDERS <sup>a</sup>—COMPREHENSIVE LIST—Continued

Waste code	Waste category	Effective date
P095 .....	All .....	Aug. 8, 1990.
P096 .....	All .....	Aug. 8, 1990.
P097 .....	All .....	June 8, 1989.
P098 .....	All .....	June 8, 1989.
P099 (silver) .....	Wastewater .....	Aug. 8, 1990.
P099 .....	All others .....	June 8, 1989.
P101 .....	All .....	Aug. 8, 1990.
P102 .....	All .....	Aug. 8, 1990.
P103 .....	All .....	Aug. 8, 1990.
P104 (silver) .....	Wastewater .....	Aug. 8, 1990.
P104 .....	All others .....	June 8, 1989.
P105 .....	All .....	Aug. 8, 1990.
P106 .....	All .....	June 8, 1989.
P108 .....	All .....	Aug. 8, 1990.
P109 .....	All .....	June 8, 1989.
P110 .....	All .....	Aug. 8, 1990.
P111 .....	All .....	June 8, 1989.
P112 .....	All .....	Aug. 8, 1990.
P113 .....	All .....	Aug. 8, 1990.
P114 .....	All .....	Aug. 8, 1990.
P115 .....	All .....	Aug. 8, 1990.
P116 .....	All .....	Aug. 8, 1990.
P118 .....	All .....	Aug. 8, 1990.
P119 .....	All .....	Aug. 8, 1990.
P120 .....	All .....	Aug. 8, 1990.
P121 .....	All .....	June 8, 1989.
P122 .....	All .....	Aug. 8, 1990.
P123 .....	All .....	Aug. 8, 1990.
P127 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P127 .....	All others .....	July 8, 1996.
P128 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P128 .....	All others .....	July 8, 1996.
P185 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P185 .....	All others .....	July 8, 1996.
P188 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P188 .....	All others .....	July 8, 1996.
P189 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P189 .....	All others .....	July 8, 1996.
P190 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P190 .....	All others .....	July 8, 1996.
P191 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P191 .....	All others .....	July 8, 1996.
P192 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P192 .....	All others .....	July 8, 1996.
P194 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P194 .....	All others .....	July 8, 1996.
P196 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P196 .....	All others .....	July 8, 1996.
P197 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P197 .....	All others .....	July 8, 1996.
P198 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P198 .....	All others .....	July 8, 1996.
P199 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P199 .....	All others .....	July 8, 1996.
P201 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P201 .....	All others .....	July 8, 1996.
P202 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P202 .....	All others .....	July 8, 1996.
P203 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P203 .....	All others .....	July 8, 1996.
P204 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P204 .....	All others .....	July 8, 1996.
P205 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
P205 .....	All others .....	July 8, 1996.
U001 .....	All .....	Aug. 8, 1990.
U002 .....	All .....	Aug. 8, 1990.
U003 .....	All .....	Aug. 8, 1990.
U004 .....	All .....	Aug. 8, 1990.
U005 .....	All .....	Aug. 8, 1990.
U006 .....	All .....	Aug. 8, 1990.
U007 .....	All .....	Aug. 8, 1990.

TABLE 1.—EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED  
IN THE LDRS <sup>a</sup>—COMPREHENSIVE LIST—Continued

Waste code	Waste category	Effective date
U008	All	Aug. 8, 1990.
U009	All	Aug. 8, 1990.
U010	All	Aug. 8, 1990.
U011	All	Aug. 8, 1990.
U012	All	Aug. 8, 1990.
U014	All	Aug. 8, 1990.
U015	All	Aug. 8, 1990.
U016	All	Aug. 8, 1990.
U017	All	Aug. 8, 1990.
U018	All	Aug. 8, 1990.
U019	All	Aug. 8, 1990.
U020	All	Aug. 8, 1990.
U021	All	Aug. 8, 1990.
U022	All	Aug. 8, 1990.
U023	All	Aug. 8, 1990.
U024	All	Aug. 8, 1990.
U025	All	Aug. 8, 1990.
U026	All	Aug. 8, 1990.
U027	All	Aug. 8, 1990.
U028	All	June 8, 1989.
U029	All	Aug. 8, 1990.
U030	All	Aug. 8, 1990.
U031	All	Aug. 8, 1990.
U032	All	Aug. 8, 1990.
U033	All	Aug. 8, 1990.
U034	All	Aug. 8, 1990.
U035	All	Aug. 8, 1990.
U036	All	Aug. 8, 1990.
U037	All	Aug. 8, 1990.
U038	All	Aug. 8, 1990.
U039	All	Aug. 8, 1990.
U041	All	Aug. 8, 1990.
U042	All	Aug. 8, 1990.
U043	All	Aug. 8, 1990.
U044	All	Aug. 8, 1990.
U045	All	Aug. 8, 1990.
U046	All	Aug. 8, 1990.
U047	All	Aug. 8, 1990.
U048	All	Aug. 8, 1990.
U049	All	Aug. 8, 1990.
U050	All	Aug. 8, 1990.
U051	All	Aug. 8, 1990.
U052	All	Aug. 8, 1990.
U053	All	Aug. 8, 1990.
U055	All	Aug. 8, 1990.
U056	All	Aug. 8, 1990.
U057	All	Aug. 8, 1990.
U058	All	June 8, 1989.
U059	All	Aug. 8, 1990.
U060	All	Aug. 8, 1990.
U061	All	Aug. 8, 1990.
U062	All	Aug. 8, 1990.
U063	All	Aug. 8, 1990.
U064	All	Aug. 8, 1990.
U066	All	Aug. 8, 1990.
U067	All	Aug. 8, 1990.
U068	All	Aug. 8, 1990.
U069	All	June 30, 1992.
U070	All	Aug. 8, 1990.
U071	All	Aug. 8, 1990.
U072	All	Aug. 8, 1990.
U073	All	Aug. 8, 1990.
U074	All	Aug. 8, 1990.
U075	All	Aug. 8, 1990.
U076	All	Aug. 8, 1990.
U077	All	Aug. 8, 1990.
U078	All	Aug. 8, 1990.
U079	All	Aug. 8, 1990.
U080	All	Aug. 8, 1990.
U081	All	Aug. 8, 1990.
U082	All	Aug. 8, 1990.

TABLE 1.—EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED IN THE LDRS <sup>a</sup>—COMPREHENSIVE LIST—Continued

Waste code	Waste category	Effective date
U083	All	Aug. 8, 1990.
U084	All	Aug. 8, 1990.
U085	All	Aug. 8, 1990.
U086	All	Aug. 8, 1990.
U087	All	June 8, 1989.
U088	All	June 8, 1989.
U089	All	Aug. 8, 1990.
U090	All	Aug. 8, 1990.
U091	All	Aug. 8, 1990.
U092	All	Aug. 8, 1990.
U093	All	Aug. 8, 1990.
U094	All	Aug. 8, 1990.
U095	All	Aug. 8, 1990.
U096	All	Aug. 8, 1990.
U097	All	Aug. 8, 1990.
U098	All	Aug. 8, 1990.
U099	All	Aug. 8, 1990.
U101	All	Aug. 8, 1990.
U102	All	June 8, 1989.
U103	All	Aug. 8, 1990.
U105	All	Aug. 8, 1990.
U106	All	Aug. 8, 1990.
U107	All	June 8, 1989.
U108	All	Aug. 8, 1990.
U109	All	Aug. 8, 1990.
U110	All	Aug. 8, 1990.
U111	All	Aug. 8, 1990.
U112	All	Aug. 8, 1990.
U113	All	Aug. 8, 1990.
U114	All	Aug. 8, 1990.
U115	All	Aug. 8, 1990.
U116	All	Aug. 8, 1990.
U117	All	Aug. 8, 1990.
U118	All	Aug. 8, 1990.
U119	All	Aug. 8, 1990.
U120	All	Aug. 8, 1990.
U121	All	Aug. 8, 1990.
U122	All	Aug. 8, 1990.
U123	All	Aug. 8, 1990.
U124	All	Aug. 8, 1990.
U125	All	Aug. 8, 1990.
U126	All	Aug. 8, 1990.
U127	All	Aug. 8, 1990.
U128	All	Aug. 8, 1990.
U129	All	Aug. 8, 1990.
U130	All	Aug. 8, 1990.
U131	All	Aug. 8, 1990.
U132	All	Aug. 8, 1990.
U133	All	Aug. 8, 1990.
U134	All	Aug. 8, 1990.
U135	All	Aug. 8, 1990.
U136	Wastewater	Aug. 8, 1990.
U136	Nonwastewater	May 8, 1992.
U137	All	Aug. 8, 1990.
U138	All	Aug. 8, 1990.
U140	All	Aug. 8, 1990.
U141	All	Aug. 8, 1990.
U142	All	Aug. 8, 1990.
U143	All	Aug. 8, 1990.
U144	All	Aug. 8, 1990.
U145	All	Aug. 8, 1990.
U146	All	Aug. 8, 1990.
U147	All	Aug. 8, 1990.
U148	All	Aug. 8, 1990.
U149	All	Aug. 8, 1990.
U150	All	Aug. 8, 1990.
U151	Wastewater	Aug. 8, 1990.
U151	Nonwastewater	May 8, 1992.
U152	All	Aug. 8, 1990.
U153	All	Aug. 8, 1990.
U154	All	Aug. 8, 1990.

TABLE 1.—EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED  
IN THE LDRS <sup>a</sup>—COMPREHENSIVE LIST—Continued

Waste code	Waste category	Effective date
U155	All	Aug. 8, 1990.
U156	All	Aug. 8, 1990.
U157	All	Aug. 8, 1990.
U158	All	Aug. 8, 1990.
U159	All	Aug. 8, 1990.
U160	All	Aug. 8, 1990.
U161	All	Aug. 8, 1990.
U162	All	Aug. 8, 1990.
U163	All	Aug. 8, 1990.
U164	All	Aug. 8, 1990.
U165	All	Aug. 8, 1990.
U166	All	Aug. 8, 1990.
U167	All	Aug. 8, 1990.
U168	All	Aug. 8, 1990.
U169	All	Aug. 8, 1990.
U170	All	Aug. 8, 1990.
U171	All	Aug. 8, 1990.
U172	All	Aug. 8, 1990.
U173	All	Aug. 8, 1990.
U174	All	Aug. 8, 1990.
U176	All	Aug. 8, 1990.
U177	All	Aug. 8, 1990.
U178	All	Aug. 8, 1990.
U179	All	Aug. 8, 1990.
U180	All	Aug. 8, 1990.
U181	All	Aug. 8, 1990.
U182	All	Aug. 8, 1990.
U183	All	Aug. 8, 1990.
U184	All	Aug. 8, 1990.
U185	All	Aug. 8, 1990.
U186	All	Aug. 8, 1990.
U187	All	Aug. 8, 1990.
U188	All	Aug. 8, 1990.
U189	All	Aug. 8, 1990.
U190	All	June 8, 1989.
U191	All	Aug. 8, 1990.
U192	All	Aug. 8, 1990.
U193	All	Aug. 8, 1990.
U194	All	June 8, 1989.
U196	All	Aug. 8, 1990.
U197	All	Aug. 8, 1990.
U200	All	Aug. 8, 1990.
U201	All	Aug. 8, 1990.
U202	All	Aug. 8, 1990.
U203	All	Aug. 8, 1990.
U204	All	Aug. 8, 1990.
U205	All	Aug. 8, 1990.
U206	All	Aug. 8, 1990.
U207	All	Aug. 8, 1990.
U208	All	Aug. 8, 1990.
U209	All	Aug. 8, 1990.
U210	All	Aug. 8, 1990.
U211	All	Aug. 8, 1990.
U213	All	Aug. 8, 1990.
U214	All	Aug. 8, 1990.
U215	All	Aug. 8, 1990.
U216	All	Aug. 8, 1990.
U217	All	Aug. 8, 1990.
U218	All	Aug. 8, 1990.
U219	All	Aug. 8, 1990.
U220	All	Aug. 8, 1990.
U221	All	June 8, 1989.
U222	All	Aug. 8, 1990.
U223	All	June 8, 1989.
U225	All	Aug. 8, 1990.
U226	All	Aug. 8, 1990.
U227	All	Aug. 8, 1990.
U228	All	Aug. 8, 1990.
U234	All	Aug. 8, 1990.
U235	All	June 8, 1989.
U236	All	Aug. 8, 1990.



TABLE 1.—EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED IN THE LDERS <sup>a</sup>—COMPREHENSIVE LIST—Continued

Waste code	Waste category	Effective date
U237	All	Aug. 8, 1990.
U238	All	Aug. 8, 1990.
U239	All	Aug. 8, 1990.
U240	All	Aug. 8, 1990.
U243	All	Aug. 8, 1990.
U244	All	Aug. 8, 1990.
U246	All	Aug. 8, 1990.
U247	All	Aug. 8, 1990.
U248	All	Aug. 8, 1990.
U249	All	Aug. 8, 1990.
U271	Mixed with radioactive wastes	Apr. 8, 1998.
U271	All others	July 8, 1996.
U277	Mixed with radioactive wastes	Apr. 8, 1998.
U277	All others	July 8, 1996.
U278	Mixed with radioactive wastes	Apr. 8, 1998.
U278	All others	July 8, 1996.
U279	Mixed with radioactive wastes	Apr. 8, 1998.
U279	All others	July 8, 1996.
U280	Mixed with radioactive wastes	Apr. 8, 1998.
U280	All others	July 8, 1996.
U328	Mixed with radioactive wastes	June 30, 1994.
U328	All others	Nov. 9, 1992.
U353	Mixed with radioactive wastes	June 30, 1994.
U353	All others	Nov. 9, 1992.
U359	Mixed with radioactive wastes	June 30, 1994.
U359	All others	Nov. 9, 1992.
U364	Mixed with radioactive wastes	Apr. 8, 1998.
U364	All others	July 8, 1996.
U365	Mixed with radioactive wastes	Apr. 8, 1998.
U365	All others	July 8, 1996.
U366	Mixed with radioactive wastes	Apr. 8, 1998.
U366	All others	July 8, 1996.
U367	Mixed with radioactive wastes	Apr. 8, 1998.
U367	All others	July 8, 1996.
U372	Mixed with radioactive wastes	Apr. 8, 1998.
U372	All others	July 8, 1996.
U373	Mixed with radioactive wastes	Apr. 8, 1998.
U373	All others	July 8, 1996.
U375	Mixed with radioactive wastes	Apr. 8, 1998.
U375	All others	July 8, 1996.
U376	Mixed with radioactive wastes	Apr. 8, 1998.
U376	All others	July 8, 1996.
U377	Mixed with radioactive wastes	Apr. 8, 1998.
U377	All others	July 8, 1996.
U378	Mixed with radioactive wastes	Apr. 8, 1998.
U378	All others	July 8, 1996.
U379	Mixed with radioactive wastes	Apr. 8, 1998.
U379	All others	July 8, 1996.
U381	Mixed with radioactive wastes	Apr. 8, 1998.
U381	All others	July 8, 1996.
U382	Mixed with radioactive wastes	Apr. 8, 1998.
U382	All others	July 8, 1996.
U383	Mixed with radioactive wastes	Apr. 8, 1998.
U383	All others	July 8, 1996.
U384	Mixed with radioactive wastes	Apr. 8, 1998.
U384	All others	July 8, 1996.
U385	Mixed with radioactive wastes	Apr. 8, 1998.
U385	All others	July 8, 1996.
U386	Mixed with radioactive wastes	Apr. 8, 1998.
U386	All others	July 8, 1996.
U387	Mixed with radioactive wastes	Apr. 8, 1998.
U387	All others	July 8, 1996.
U389	Mixed with radioactive wastes	Apr. 8, 1998.
U389	All others	July 8, 1996.
U390	Mixed with radioactive wastes	Apr. 8, 1998.
U390	All others	July 8, 1996.
U391	Mixed with radioactive wastes	Apr. 8, 1998.
U391	All others	July 8, 1996.
U392	Mixed with radioactive wastes	Apr. 8, 1998.
U392	All others	July 8, 1996.
U393	Mixed with radioactive wastes	Apr. 8, 1998.

TABLE 1.—EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED IN THE LDRS <sup>a</sup>—COMPREHENSIVE LIST—Continued

Waste code	Waste category	Effective date
U393 .....	All others .....	July 8, 1996.
U394 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
U394 .....	All others .....	July 8, 1996.
U395 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
U395 .....	All others .....	July 8, 1996.
U396 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
U396 .....	All others .....	July 8, 1996.
U400 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
U400 .....	All others .....	July 8, 1996.
U401 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
U401 .....	All others .....	July 8, 1996.
U402 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
U402 .....	All others .....	July 8, 1996.
U403 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
U403 .....	All others .....	July 8, 1996.
U404 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
U404 .....	All others .....	July 8, 1996.
U407 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
U407 .....	All others .....	July 8, 1996.
U409 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
U409 .....	All others .....	July 8, 1996.
U410 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
U410 .....	All others .....	July 8, 1996.
U411 .....	Mixed with radioactive wastes .....	Apr. 8, 1998.
U411 .....	All others .....	July 8, 1996.

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

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

<sup>c</sup>The standard was revised in the Third Third Emergency Rule (58 FR 29860, May 24, 1993); the original effective date was August 8, 1990.

<sup>d</sup>The standard was revised in the Phase II Final Rule (59 FR 47982, Sept. 19, 1994); the original effective date was August 8, 1990.

<sup>e</sup>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, 1998.
3. All soil and debris contaminated with First Third wastes for which treatment standards are based on incineration.	Aug. 8, 1990.
4. All soil and debris contaminated with Second Third wastes for which treatment standards are based on incineration.	June 8, 1991.
5. All soil and debris contaminated with Third Third wastes or, First or Second Third "soft hammer" wastes which had treatment standards promulgated in the Third Third rule, for which treatment standards are based on incineration, vitrification, or mercury retorting, acid leaching followed by chemical precipitation, or thermal recovery of metals; as well as all inorganic solids debris contaminated with D004-D011 wastes, and all soil and debris contaminated with mixed RCRA/radioactive wastes.	May 8, 1992.
6. Soil and debris contaminated with D012-D043, K141-K145, and K147-151 wastes .....	Dec. 19, 1994.
7. Debris (only) contaminated with F037, F038, K107-K112, K117, K118, K123-K126, K131, K132, K136, U328, U353, U359.	Dec. 19, 1994
8. Soil and debris contaminated with K156-K161, P127, P128, P188-P192, P194, P196-P199, P201-P205, U271, U277-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U400-U404, U407, and U409-U411 wastes.	July 8, 1996.
9. Soil and debris contaminated with K088 wastes .....	Oct. 8, 1997.
10. Soil and debris contaminated with radioactive wastes mixed with K088, K156-K161, P127, P128, P188-P192, P194, P196-P199, P201-P205, U271, U277-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U400-U404, U407, and U409-U411 wastes.	April 8, 1998.
11. Soil and debris contaminated with F032, F034, and F035 .....	May 12, 1997.
12. Soil and debris contaminated with newly identified D004-D011 toxicity characteristic wastes and mineral processing wastes..	Aug. 24, 1998.
13. Soil and debris contaminated with mixed radioactive newly identified D004-D011 characteristic wastes and mineral processing wastes..	May 26, 2000.

Note: Appendix VII is provided for the convenience of the reader.

[62 FR 26025, May 12, 1997, as amended at 63 FR 28751, May 26, 1998]

EFFECTIVE DATE NOTE: At 63 FR 28751, May 26, 1998, Appendix VII to part 268 was amended in Table 1 by removing the entries for waste code F033; revising the second entry for waste code F032, the second entry for

F034, the first entry for K088, the entries for D003–D011, adding two entries for waste code F035; and in Table 2 by revising entry number 9 and adding entries 12 and 13, effective Aug. 24, 1998. For the convenience of the user, the superseded text is set forth as follows:

APPENDIX VII TO PART 268—LDR EFFECTIVE DATES OF SURFACE DISPOSED PROHIBITED HAZARDOUS WASTES

TABLE 1—EFFECTIVE DATES OF SURFACE DISPOSED WASTES (NON-SOIL AND DEBRIS) REGULATED IN THE LDRS<sup>a</sup>—COMPREHENSIVE LIST

Waste code	Waste category	Effective date
D003 <sup>c</sup> .....	All .....	July 8, 1996.
D004 .....	Nonwastewater .....	May 8, 1992.
D004 .....	Wastewater .....	Aug. 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.
F032 .....	All others .....	May 12, 1997
F034 .....	All others .....	May 12, 1997
K088 .....	Mixed with radioactive wastes .....	Apr. 8, 1998

\* \* \* \* \*

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

Restricted hazardous waste in CSD	Effective date
9. Soil and debris contaminated with K088 wastes .....	Jan. 8, 1997.

\* \* \* \* \*

APPENDIX VIII TO PART 268—LDR EFFECTIVE DATES OF INJECTED PROHIBITED HAZARDOUS WASTES

NATIONAL CAPACITY LDR VARIANCES FOR UIC WASTES<sup>a</sup>

Waste code	Waste category	Effective date
F001–F005 .....	All spent F001–F005 solvent containing less than 1 percent total F001–F005 solvent constituents. ....	Aug. 8, 1990.
D001 (except High TOC Ignitable Liquids Subcategory). ....	All .....	Feb. 10, 1994.
D001 (High TOC Ignitable Characteristic Liquids Subcategory). ....	Nonwastewater .....	Sept. 19, 1995.
D002 <sup>b</sup> .....	All .....	May 8, 1992.
D002 <sup>c</sup> .....	All .....	Feb. 10, 1994.
D003 (cyanides) .....	All .....	May 8, 1992.
D003 (sulfides) .....	All .....	May 8, 1992.
D003 (explosives, reactives) .....	All .....	May 8, 1992.
D007 .....	All .....	May 8, 1992.
D009 .....	Nonwastewater .....	May 8, 1992.
D012 .....	All .....	Sept. 19, 1995.
D013 .....	All .....	Sept. 19, 1995.
D014 .....	All .....	Sept. 19, 1995.
D015 .....	All .....	Sept. 19, 1995.
D016 .....	All .....	Sept. 19, 1995.

NATIONAL CAPACITY LDR VARIANCES FOR UIC WASTES <sup>a</sup>—Continued

Waste code	Waste category	Effective date
D017	All	Sept. 19, 1995.
D018	All, including mixed with radioactive wastes	Apr. 8, 1998.
D019	All, including mixed with radioactive wastes	Apr. 8, 1998.
D020	All, including mixed with radioactive wastes	Apr. 8, 1998.
D021	All, including mixed with radioactive wastes	Apr. 8, 1998.
D022	All, including mixed with radioactive wastes	Apr. 8, 1998.
D023	All, including mixed radioactive wastes	Apr. 8, 1998.
D024	All, including mixed radioactive wastes	Apr. 8, 1998.
D025	All, including mixed radioactive wastes	Apr. 8, 1998.
D026	All, including mixed radioactive wastes	Apr. 8, 1998.
D027	All, including mixed radioactive wastes	Apr. 8, 1998.
D028	All, including mixed radioactive wastes	Apr. 8, 1998.
D029	All, including mixed radioactive wastes	Apr. 8, 1998.
D030	All, including mixed radioactive wastes	Apr. 8, 1998.
D031	All, including mixed radioactive wastes	Apr. 8, 1998.
D032	All, including mixed radioactive wastes	Apr. 8, 1998.
D033	All, including mixed radioactive wastes	Apr. 8, 1998.
D034	All, including mixed radioactive wastes	Apr. 8, 1998.
D035	All, including mixed radioactive wastes	Apr. 8, 1998.
D036	All, including mixed radioactive wastes	Apr. 8, 1998.
D037	All, including mixed radioactive wastes	Apr. 8, 1998.
D038	All, including mixed radioactive wastes	Apr. 8, 1998.
D039	All, including mixed radioactive wastes	Apr. 8, 1998.
D040	All, including mixed radioactive wastes	Apr. 8, 1998.
D041	All, including mixed radioactive wastes	Apr. 8, 1998.
D042	All, including mixed radioactive wastes	Apr. 8, 1998.
D043	All, including mixed radioactive wastes	Apr. 8, 1998.
F007	All	June 8, 1991.
F032	All, including mixed radioactive wastes	May 12, 1999.
F034	All, including mixed radioactive wastes	May 12, 1999.
F035	All, including mixed radioactive wastes	May 12, 1999.
F037	All	Nov. 8, 1992.
F038	All	Nov. 8, 1992.
F039	Wastewater	May 8, 1992.
K009	Wastewater	June 8, 1991.
K011	Nonwastewater	June 8, 1991.
K011	Wastewater	May 8, 1992.
K011	Nonwastewater	June 8, 1991.
K011	Wastewater	May 8, 1992.
K013	Nonwastewater	June 8, 1991.
K013	Wastewater	May 8, 1992.
K014	All	May 8, 1992.
K016 (dilute)	All	June 8, 1991.
K049	All	Aug. 8, 1990.
K050	All	Aug. 8, 1990.
K051	All	Aug. 8, 1990.
K052	All	Aug. 8, 1990.
K062	All	Aug. 8, 1990.
K071	All	Aug. 8, 1990.
K088	All	Jan. 8, 1997.
K104	All	Aug. 8, 1990.
K107	All	Nov. 8, 1992.
K108	All	Nov. 9, 1992.
K109	All	Nov. 9, 1992.
K110	All	Nov. 9, 1992.
K111	All	Nov. 9, 1992.
K112	All	Nov. 9, 1992.
K117	All	June 30, 1995.
K118	All	June 30, 1995.
K123	All	Nov. 9, 1992.
K124	All	Nov. 9, 1992.
K125	All	Nov. 9, 1992.
K126	All	Nov. 9, 1992.
K131	All	June 30, 1995.
K132	All	June 30, 1995.
K136	All	Nov. 9, 1992.
K141	All	Dec. 19, 1994.
K142	All	Dec. 19, 1994.
K143	All	Dec. 19, 1994.
K144	All	Dec. 19, 1994.
K145	All	Dec. 19, 1994.
K147	All	Dec. 19, 1994.

NATIONAL CAPACITY LDR VARIANCES FOR UIC WASTES <sup>a</sup>—Continued

Waste code	Waste category	Effective date
K148 .....	All .....	Dec. 19, 1994.
K149 .....	All .....	Dec. 19, 1994.
K150 .....	All .....	Dec. 19, 1994.
K151 .....	All .....	Dec. 19, 1994.
K156 .....	All .....	July 8, 1996.
K157 .....	All .....	July 8, 1996.
K158 .....	All .....	July 8, 1996.
K159 .....	All .....	July 8, 1996.
K160 .....	All .....	July 8, 1996.
K161 .....	All .....	July 8, 1996.
NA .....	Newly identified mineral processing wastes from titanium di- oxide production and mixed radioactive/newly identified D004–D011 characteristic wastes and mineral processing wastes..	May 26, 2000.
P127 .....	All .....	July 8, 1996.
P128 .....	All .....	July 8, 1996.
P185 .....	All .....	July 8, 1996.
P188 .....	All .....	July 8, 1996.
P189 .....	All .....	July 8, 1996.
P190 .....	All .....	July 8, 1996.
P191 .....	All .....	July 8, 1996.
P192 .....	All .....	July 8, 1996.
P194 .....	All .....	July 8, 1996.
P196 .....	All .....	July 8, 1996.
P197 .....	All .....	July 8, 1996.
P198 .....	All .....	July 8, 1996.
P199 .....	All .....	July 8, 1996.
P201 .....	All .....	July 8, 1996.
P202 .....	All .....	July 8, 1996.
P203 .....	All .....	July 8, 1996.
P204 .....	All .....	July 8, 1996.
P205 .....	All .....	July 8, 1996.
U271 .....	All .....	July 8, 1996.
U277 .....	All .....	July 8, 1996.
U278 .....	All .....	July 8, 1996.
U279 .....	All .....	July 8, 1996.
U280 .....	All .....	July 8, 1996.
U328 .....	All .....	Nov. 9, 1992.
U353 .....	All .....	Nov. 9, 1992.
U359 .....	All .....	Nov. 9, 1992.
U364 .....	All .....	July 8, 1996.
U365 .....	All .....	July 8, 1996.
U366 .....	All .....	July 8, 1996.
U367 .....	All .....	July 8, 1996.
U372 .....	All .....	July 8, 1996.
U373 .....	All .....	July 8, 1996.
U375 .....	All .....	July 8, 1996.
U376 .....	All .....	July 8, 1996.
U377 .....	All .....	July 8, 1996.
U378 .....	All .....	July 8, 1996.
U379 .....	All .....	July 8, 1996.
U381 .....	All .....	July 8, 1996.
U382 .....	All .....	July 8, 1996.
U383 .....	All .....	July 8, 1996.
U384 .....	All .....	July 8, 1996.
U385 .....	All .....	July 8, 1996.
U386 .....	All .....	July 8, 1996.
U387 .....	All .....	July 8, 1996.
U389 .....	All .....	July 8, 1996.
U390 .....	All .....	July 8, 1996.
U391 .....	All .....	July 8, 1996.
U392 .....	All .....	July 8, 1996.
U395 .....	All .....	July 8, 1996.
U396 .....	All .....	July 8, 1996.
U400 .....	All .....	July 8, 1996.
U401 .....	All .....	July 8, 1996.
U402 .....	All .....	July 8, 1996.
U403 .....	All .....	July 8, 1996.
U404 .....	All .....	July 8, 1996.
U407 .....	All .....	July 8, 1996.
U409 .....	All .....	July 8, 1996.
U410 .....	All .....	July 8, 1996.

NATIONAL CAPACITY LDR VARIANCES FOR UIC WASTES <sup>a</sup>—Continued

Waste code	Waste category	Effective date
U411 .....	All .....	July 8, 1996.

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

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

<sup>c</sup> 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.

[62 FR 26037, May 12, 1997, as amended at 63 FR 28752, May 26, 1998]

EFFECTIVE DATE NOTE: At 63 FR 28752, May 26, 1998, Appendix VIII to part 268 was amended by adding in alpha numeric order the entry "NA", effective Aug. 24, 1998.

APPENDIX IX TO PART 268—EXTRACTION PROCEDURE (EP) TOXICITY TEST  
METHOD AND STRUCTURAL INTEGRITY TEST (METHOD 1310)

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

[58 FR 46051, Aug. 31, 1993]

## APPENDIX X TO PART 268 [RESERVED]

APPENDIX XI TO PART 268—METAL BEARING WASTES PROHIBITED FROM DILUTION IN A  
COMBUSTION UNIT ACCORDING TO 40 CFR 268.3(c) <sup>1</sup>

Waste code	Waste description
D004 .....	Toxicity Characteristic for Arsenic.
D005 .....	Toxicity Characteristic for Barium.
D006 .....	Toxicity Characteristic for Cadmium.
D007 .....	Toxicity Characteristic for Chromium.
D008 .....	Toxicity Characteristic for Lead.
D009 .....	Toxicity Characteristic for Mercury.
D010 .....	Toxicity Characteristic for Selenium.
D011 .....	Toxicity Characteristic for Silver.
F006 .....	Wastewater treatment sludges from electroplating operations except from the following processes: (1) sulfuric acid anodizing of aluminum; (2) tin plating carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum.
F007 .....	Spent cyanide plating bath solutions from electroplating operations.
F008 .....	Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process.
F009 .....	Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process.
F010 .....	Quenching bath residues from oil baths from metal treating operations where cyanides are used in the process.
F011 .....	Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations.
F012 .....	Quenching waste water treatment sludges from metal heat treating operations where cyanides are used in the process.
F019 .....	Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum car washing when such phosphating is an exclusive conversion coating process.
K002 .....	Wastewater treatment sludge from the production of chrome yellow and orange pigments.
K003 .....	Wastewater treatment sludge from the production of molybdate orange pigments.
K004 .....	Wastewater treatment sludge from the production of zinc yellow pigments.
K005 .....	Wastewater treatment sludge from the production of chrome green pigments.
K006 .....	Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous and hydrated).
K007 .....	Wastewater treatment sludge from the production of iron blue pigments.
K008 .....	Oven residue from the production of chrome oxide green pigments.
K061 .....	Emission control dust/sludge from the primary production of steel in electric furnaces.
K069 .....	Emission control dust/sludge from secondary lead smelting.
K071 .....	Brine purification muds from the mercury cell processes in chlorine production, where separately prepurified brine is not used.
K100 .....	Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting.

**APPENDIX XI TO PART 268—METAL BEARING WASTES PROHIBITED FROM DILUTION IN A  
COMBUSTION UNIT ACCORDING TO 40 CFR 268.3(c) <sup>1</sup>—Continued**

Waste code	Waste description
K106 .....	Sludges from the mercury cell processes for making chlorine.
P010 .....	Arsenic acid H <sub>3</sub> AsO <sub>4</sub>
P011 .....	Arsenic oxide As <sub>2</sub> O <sub>3</sub>
P012 .....	Arsenic trioxide
P013 .....	Barium cyanide
P015 .....	Beryllium
P029 .....	Copper cyanide Cu(CN)
P074 .....	Nickel cyanide Ni(CN) <sub>2</sub>
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 <sub>2</sub> O <sub>5</sub>
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.

<sup>1</sup> A combustion unit is defined as any thermal technology subject to 40 CFR part 264, subpart O; Part 265, subpart O; and/or 266, subpart H.

[61 FR 15658, Apr. 8, 1996]

**PART 270—EPA ADMINISTERED PERMIT PROGRAMS: THE HAZARDOUS WASTE PERMIT PROGRAM**

**Subpart A—General Information**

Sec.

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- 270.30 Conditions applicable to all permits.
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- 270.40 Transfer of permits.