

GUIDEBOOK TO HAWAII ADMINISTRATIVE RULES
CHAPTER 11-268.1
HAZARDOUS WASTE MANAGEMENT:
LAND DISPOSAL RESTRICTIONS

IMPORTANT

This guidebook is provided to assist regulated businesses and the public in understanding Hawaii Administrative Rules (HAR) chapters 11-260.1 to 11-279.1, which now incorporate by reference portions of the Code of Federal Regulations (CFR). *This guidebook is not the regulations.*

Please go to <http://health.hawaii.gov/shwb/hazwaste/> or call the Department of Health Solid and Hazardous Waste Branch at (808) 586-4226 to obtain a copy of the Hawaii Administrative Rules regulating hazardous waste and used oil within the state of Hawaii.

- The table of contents for 40 CFR part 268 is provided below for convenience.
- 40 CFR part 268 (July 1, 2017) is incorporated by reference in §11-268.1-1, HAR with substitutions made in §11-268.1-2 and amendments made in §§11-268.1-3 to 11-268.1-6.
- The text of 40 CFR part 268 (July 1, 2017) is copied below and changes made to the incorporated text in §§11-268.1-2 to 11-268.1-6, HAR have been made. Exceptions in §11-268.1-2(b) and (d), HAR have been noted in blue.
- *Treatment standard tables in 40 CFR part 268 subpart D and some appendices have not been reproduced. See 40 CFR part 268; links are provided.*
- All references to provisions of 40 C.F.R. parts 124, 260 to 268, 270, 273, and 279 in the text pasted below mean the Hawaii Administrative Rules analog, as incorporated and amended in chapters 11-260.1 to 11-279.1, except as noted in §11-268.1-2(d) and in blue here.
- The proper citation for the Hawaii Administrative Rules analog of a CFR section is constructed like this: “40 CFR section 262.16, as incorporated and amended in section 11-262.1-1, Hawaii Administrative Rules”, “40 CFR §260.43, as incorporated and amended in §11-260.1-1, HAR”, or “40 CFR §273.13, as incorporated and amended in chapter 11-273.1, HAR”.

IF PRINTING, print these additional documents, if needed:

- [40 CFR part 268 subpart D](#) (includes 40 CFR §§268.40 to 268.49 with all tables)
- [40 CFR §268.40 \(with Treatment Standard table\)](#)
- [40 CFR §268.42 \(with Technology Codes and Description of Technology-Based Standards Table\)](#)
- [40 CFR §268.45 \(with Alternative Treatment Standards for Hazardous Debris Table\)](#)
- [40 CFR §268.48 \(with Universal Treatment Standards Table\)](#)

- [Appendix III to Part 268—List of Halogenated Organic Compounds Regulated Under § 268.32](#)
- [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](#)
- [Appendix VIII to Part 268—LDR Effective Dates of Injected Prohibited Hazardous Wastes](#)
- [Appendix XI to Part 268—Metal Bearing Wastes Prohibited From Dilution in a Combustion Unit According to 40 CFR 268.3\(c\)](#)

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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 \[federal\]](#), 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 \[federal\]](#), 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 very small quantity generators, as defined in § 260.10 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 § 273.3 of this chapter;
- (3) Mercury-containing equipment as described in § 273.4 of this chapter;
- (4) Lamps as described in 40 CFR 273.5; and
- (5) Electronic items as described in 40 C.F.R. section 273.6, as incorporated and amended in section 11-273.1-1.

§ 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 or staging pile, and includes, but is not limited to, placement in a landfill, surface impoundment, waste pile, injection well, land treatment facility, salt dome formation, salt bed formation, underground mine or cave, or placement in a concrete vault, or bunker intended for disposal purposes.
- (d) Nonwastewaters are wastes that do not meet the criteria for wastewaters in paragraph (f) of this section.
- (e) Polychlorinated biphenyls or PCBs are halogenated organic compounds defined in accordance with 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 hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by § 268.45 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

(h) Hazardous debris means debris that contains a hazardous waste listed in subpart D of part 261 of this chapter, or that exhibits a characteristic of hazardous waste identified in subpart C of part 261 of this chapter. Any deliberate mixing of prohibited hazardous waste with debris that changes its treatment classification (i.e., from waste to hazardous debris) is not allowed under the dilution prohibition in § 268.3.

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

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

(k) Soil means unconsolidated earth material composing the superficial geologic strata (material overlying bedrock), consisting of clay, silt, sand, or gravel size particles as classified by the U.S. Natural Resources Conservation Service, or a mixture of such materials with liquids, sludges or solids which is inseparable by simple mechanical removal processes and is made up primarily of soil by volume based on visual inspection. Any deliberate mixing of prohibited hazardous waste with soil that changes its treatment classification (i.e., from waste to contaminated soil) is not allowed under the dilution prohibition in § 268.3.

§ 268.3 Dilution prohibited as a substitute for treatment.

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

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

(c) Combustion of the hazardous waste codes listed in Appendix XI of this part is prohibited, unless the waste, at the point of generation, or after any bona fide treatment

such as cyanide destruction prior to combustion, can be demonstrated to comply with one or more of the following criteria (unless otherwise specifically prohibited from combustion):

- (1) The waste contains hazardous organic constituents or cyanide at levels exceeding the constituent-specific treatment standard found in § 268.48;
 - (2) The waste consists of organic, debris-like materials (e.g., wood, paper, plastic, or cloth) contaminated with an inorganic metal-bearing hazardous waste;
 - (3) The waste, at point of generation, has reasonable heating value such as greater than or equal to 5000 BTU per pound;
 - (4) The waste is co-generated with wastes for which combustion is a required method of treatment;
 - (5) The waste is subject to Federal and/or State requirements necessitating reduction of organics (including biological agents); or
 - (6) The waste contains greater than 1% Total Organic Carbon (TOC).
- (d) It is a form of impermissible dilution, and therefore prohibited, to add iron filings or other metallic forms of iron to lead-containing hazardous wastes in order to achieve any land disposal restriction treatment standard for lead. Lead-containing wastes include D008 wastes (wastes exhibiting a characteristic due to the presence of lead), all characteristic wastes containing lead as an underlying hazardous constituent, listed wastes containing lead as a regulated constituent, and hazardous media containing any of the aforementioned lead-containing wastes.

§ 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. 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 265 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 director, 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 director, after notice and an opportunity to comment, has granted a modification to the requirements on the basis of a demonstration that the surface impoundment is located, designed, and operated so as to assure that there will be no migration of any hazardous constituent into ground water or surface water at any future time.

(4) The owner or operator submits to the director 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.

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

(a) Requirements for generators:

(1) A generator of hazardous waste must determine if the waste has to be treated before it can be land disposed. This is done by determining if the hazardous waste meets the treatment standards in § 268.40, 268.45, or § 268.49. This determination can be made concurrently with the hazardous waste determination required in § 262.11 of this chapter, 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, (incorporated by reference, see § 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. (Alternatively, the generator must send the waste to a RCRA-permitted hazardous waste treatment facility, where the waste treatment facility must comply with the requirements of § 264.13 of this chapter and paragraph (b) of this section.) 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 soils contaminated with such wastes, do not need to be tested (however, if they are in a waste mixture, other wastes with concentration level treatment standards would have to be tested). If a generator determines they are managing a waste or soil contaminated with a waste, that displays a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity, they must comply with the special requirements of § 268.9 of this part in addition to any applicable requirements in this section.

(2) If the waste or contaminated soil does not meet the treatment standards, or if the generator chooses not to make the determination of whether his waste must be treated, with the initial shipment of waste to each treatment or storage facility, the generator must send a one-time written notice to each treatment or storage facility receiving the waste, and place a copy in the file. The notice must include the information in column “268.7(a)(2)” of the Generator Paperwork Requirements Table in paragraph (a)(4) of this section. (Alternatively, if the generator chooses not to make the determination of whether the waste must be treated, the notification must include the EPA Hazardous Waste Numbers and Manifest Number of the first shipment and must state “This hazardous waste may or may not be subject to the LDR treatment standards. The treatment facility must make the determination.”) No further notification is necessary until such time that the waste or facility change, in which case a new notification must be sent and a copy placed in the generator's file.

(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 column “268.7(a)(3)” of the Generator Paperwork Requirements Table in § 268.7(a)(4).

(iii) If the waste changes, the generator must send a new notice and certification to the receiving facility, and place a copy in their files.

Generators of hazardous debris excluded from the definition of hazardous waste under § 261.3(f) of this chapter are not subject to these requirements.

(4) For reporting, tracking, and recordkeeping when exceptions allow certain wastes or contaminated soil that do not meet the treatment standards to be land disposed: There are certain exemptions from the requirement that hazardous wastes or contaminated soil meet treatment standards before they can be land disposed. These include, but are not limited to case-by-case extensions under § 268.5 [federal], disposal in a no-migration unit under § 268.6 [federal], 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 the LDRs. The constituents of concern for F001-F005, and F039, and underlying hazardous constituents in characteristic wastes, unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the LDR notice	✓	✓		
4. The notice must include the applicable wastewater/ nonwastewater category (see §§ 268.2(d) and (f)) and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide)	✓	✓		
5. Waste analysis data (when available)	✓	✓	✓	
6. Date the waste is subject to the prohibition			✓	
7. For hazardous debris, when treating with the alternative treatment technologies provided by § 268.45: the contaminants subject to treatment, as described in § 268.45(b); and an indication that these contaminants are being treated to comply with § 268.45	✓		✓	

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 containment buildings regulated under 40 CFR 262.15, 262.16, and 262.17 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 to § 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 director. 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, excluding D009), 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 director.

(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 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(f) of this chapter (i.e., debris treated by an extraction or destruction technology 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 method of treatment), or § 268.49, and that contain underlying hazardous constituents as defined in § 268.2(i); if these wastes are treated on-site to remove the hazardous characteristic; and are then sent off-site for treatment of underlying hazardous constituents, the certification must state the following: “I certify under penalty of law that the waste has been treated in accordance with the requirements of 40 CFR 268.40 or 268.49 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.”

(v) For characteristic wastes that contain underlying hazardous constituents as defined § 268.2(i) that are treated on-site to remove the hazardous characteristic to treat underlying hazardous constituents to levels in § 268.48 Universal Treatment Standards, the certification must

state the following: "I certify under penalty of law that the waste has been treated in accordance with the requirements of 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 § 266.20(b) of this chapter regarding treatment standards and prohibition levels, the owner or operator of a treatment facility (i.e., the recycler) must, for the initial shipment of waste, prepare a one-time certification described in paragraph (b)(4) of this section, and a one-time notice which includes the information in paragraph (b)(3) of this section (except the manifest number). The certification and notification must be placed in the facility's on-site files. If the waste or the receiving facility changes, a new certification and notification must be prepared and placed in the on site files. In addition, the recycling facility must also keep records of the name and location of each entity receiving the hazardous waste-derived product.

(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(f) of this chapter (i.e., debris treated by an extraction or destruction technology provided by Table 1, § 268.45, and debris that the director 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 director:

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

- (ii) A description of the hazardous debris as initially generated, including the applicable EPA Hazardous Waste Number(s); and
 - (iii) For debris excluded under § 261.3(f)(1) of this chapter, the technology from Table 1, § 268.45, used to treat the debris.
- (2) The notification must be updated if the debris is shipped to a different facility, and, for debris excluded under § 261.2(f)(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(f)(1) of this chapter, the owner or operator of the treatment facility must document and certify compliance with the treatment standards of Table 1, § 268.45, as follows:
- (i) Records must be kept of all inspections, evaluations, and analyses of treated debris that are made to determine compliance with the treatment standards;
 - (ii) Records must be kept of any data or information the treater obtains during treatment of the debris that identifies key operating parameters of the treatment unit; and
 - (iii) For each shipment of treated debris, a certification of compliance with the treatment standards must be signed by an authorized representative and placed in the facility's files. The certification must state the following: "I certify under penalty of law that the debris has been treated in accordance with the requirements of 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.

§ 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. This determination may be made concurrently with the hazardous waste determination required in § 262.11 of this chapter. For purposes of part 268, the waste will carry the waste code for any applicable listed waste (40 CFR part 261, subpart D). In addition, where the waste exhibits a characteristic, the waste will carry one or more of the characteristic waste codes (40 CFR 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 generator's or treater's on-site files. The notification and certification must be updated if the process or operation generating the waste changes and/or if the subtitle D facility receiving the waste changes.

(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)(4).

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

(ii) [Reserved]

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

§§ 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.

Subpart C—Prohibitions on Land Disposal

§ 268.20 Waste specific prohibitions—Dyes and/or pigments production wastes.

- (a) Effective August 23, 2005, the waste specified in 40 CFR part 261 as EPA Hazardous Waste Number K181, and soil and debris contaminated with this waste, radioactive wastes mixed with this waste, and soil and debris contaminated with radioactive wastes mixed with this waste are prohibited from land disposal.
- (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 \[federal\]](#), 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 \[federal\]](#);
 - (4) Hazardous debris has met the treatment standards in § 268.40 or 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 \[federal\]](#), 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 of the waste, or the generator may use knowledge of the waste. If the waste contains regulated 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.

§§ 268.21-268.29 [Reserved]

§ 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 \[federal\]](#).

(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 \[federal\]](#), 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 \[federal\]](#); or

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to [§ 268.5 \[federal\]](#), 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.

§ 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\(h\)\(2\) \[federal\]](#) 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 \[federal\]](#), 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 \[federal\]](#), with respect to those wastes covered by the extension.

§ 268.32 Waste specific prohibitions—Soils exhibiting the toxicity characteristic for metals and containing PCBs.

- (a) Effective December 26, 2000, the following wastes are prohibited from land disposal: any volumes of soil exhibiting the toxicity characteristic solely because of the presence of metals (D004—D011) and containing PCBs.
- (b) The requirements of paragraph (a) of this section do not apply if:
- (1)
 - (i) The wastes contain halogenated organic compounds in total concentration less than 1,000 mg/kg; and
 - (ii) The wastes meet the treatment standards specified in Subpart D of this part for EPA hazardous waste numbers D004—D011, as applicable; or
 - (2)
 - (i) The wastes contain halogenated organic compounds in total concentration less than 1,000 mg/kg; and
 - (ii) The wastes meet the alternative treatment standards specified in [§ 268.49](#) for contaminated soil; or
 - (3) Persons have been granted an exemption from a prohibition pursuant to a petition under [§ 268.6 \[federal\]](#), with respect to those wastes and units covered by the petition; or
 - (4) The wastes meet applicable alternative treatment standards established pursuant to a petition granted under [§ 268.44 \[federal\]](#).

§ 268.33 Waste specific prohibitions—chlorinated aliphatic wastes.

- (a) Effective May 8, 2001, the wastes specified in 40 CFR part 261 as EPA Hazardous Wastes Numbers K174, and K175, soil and debris contaminated with these wastes, radioactive wastes mixed with these wastes, and soil and debris contaminated with radioactive wastes mixed with these wastes are prohibited from land disposal.
- (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 \[federal\]](#), 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 \[federal\]](#);
 - (4) Hazardous debris has met the treatment standards in § 268.40 or 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 \[federal\]](#), 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 regulated constituents in excess of the applicable levels of subpart D of this part, the waste is prohibited from land disposal, and all requirements of part 268 are applicable, except as otherwise specified.
- (d) Disposal of K175 wastes that have complied with all applicable 40 CFR 268.40 treatment standards must also be macroencapsulated in accordance with 40 CFR 268.45 Table 1 unless the waste is placed in:
- (1) A Subtitle C monofill containing only K175 wastes that meet all applicable 40 CFR 268.40 treatment standards; or
 - (2) A dedicated Subtitle C landfill cell in which all other wastes being co-disposed are at pH≤6.0.

§ 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 November 26, 1998, the following waste is prohibited from land disposal: Slag from secondary lead smelting which exhibits the Toxicity Characteristic due to the presence of one or more metals.
- (c) Effective May 26, 2000, the following wastes are prohibited from land disposal: newly identified characteristic wastes from elemental phosphorus processing; radioactive wastes mixed with EPA Hazardous wastes D004-D011 that are newly identified (i.e., wastes, soil, or debris identified as hazardous by the Toxic Characteristic Leaching Procedure but not the Extraction Procedure); or mixed with newly identified characteristic mineral processing wastes, soil, or debris.
- (d) Between May 26, 1998 and May 26, 2000, newly identified characteristic wastes from elemental phosphorus processing, radioactive waste mixed with D004-D011 wastes that are newly identified (i.e., wastes, soil, or debris identified as hazardous by the Toxic Characteristic Leaching Procedure but not the Extraction Procedure), or mixed with newly identified characteristic mineral processing wastes, soil, or debris may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in [§ 268.5\(h\) \[federal\]](#) of this part.

- (e) The requirements of paragraphs (a) and (b) of this section do not apply if:
- (1) The wastes meet the applicable treatment standards specified in subpart D of this part;
 - (2) Persons have been granted an exemption from a prohibition pursuant to a petition under [§ 268.6 \[federal\]](#), 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 \[federal\]](#); or
 - (4) Persons have been granted an extension to the effective date of a prohibition pursuant to [§ 268.5 \[federal\]](#), with respect to these wastes covered by the extension.
- (f) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in § 268.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as 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 are applicable, except as otherwise specified.

§ 268.35 Waste specific prohibitions—petroleum refining wastes.

- (a) Effective February 8, 1999, the wastes specified in 40 CFR part 261 as EPA Hazardous Wastes Numbers K169, K170, K171, and K172, soils and debris contaminated with these wastes, radioactive wastes mixed with these hazardous wastes, and soils and debris contaminated with these radioactive mixed wastes, are prohibited from land disposal.
- (b) The requirements of paragraph (a) of this section do not apply if:
- (1) The wastes meet the applicable treatment standards specified in Subpart D of this part;
 - (2) Persons have been granted an exemption from a prohibition pursuant to a petition under [§ 268.6 \[federal\]](#), 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 \[federal\]](#);
 - (4) Hazardous debris that have met treatment standards in § 268.40 or in the alternative treatment standards in § 268.45; or
 - (5) Persons have been granted an extension to the effective date of a prohibition pursuant to [§ 268.5 \[federal\]](#), 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, the waste is

prohibited from land disposal, and all requirements of this part are applicable, except as otherwise specified.

§ 268.36 Waste specific prohibitions—inorganic chemical wastes.

(a) Effective May 20, 2002, the wastes specified in 40 CFR part 261 as EPA Hazardous Wastes Numbers K176, K177, and K178, and soil and debris contaminated with these wastes, radioactive wastes mixed with these wastes, and soil and debris contaminated with radioactive wastes mixed with these wastes are prohibited from land disposal.

(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 \[federal\]](#), 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 \[federal\]](#);

(4) Hazardous debris has met the treatment standards in § 268.40 or 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 \[federal\]](#), 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 regulated constituents in excess of the applicable subpart D levels, the waste is prohibited from land disposal, and all requirements of this part are applicable, except as otherwise specified.

§ 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.

§ 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 contaminated with EPA Hazardous Waste numbers F037, F038, K107-K112, K117, K118, K123-K126, K131, K132, K136, U328, U353, U359, and soil and debris contaminated with D012-D043, K141-K145, and K147-K151 are prohibited from land disposal. The following wastes that are specified in 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\(h\)\(2\) \[federal\]](#) 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 \[federal\]](#), 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 \[federal\]](#);

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to [§ 268.5 \[federal\]](#), 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.

§ 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 September 21, 1998, 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 these wastes are prohibited from land disposal.

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

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

(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 \[federal\]](#), 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 \[federal\]](#);

(4) Persons have been granted an extension to the effective date of a prohibition pursuant to [§ 268.5 \[federal\]](#), 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.

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

(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 specified in this section by an order of magnitude.

(e) For characteristic wastes (D001-D043) that are subject to treatment standards in the following table “Treatment Standards for Hazardous Wastes,” and are not managed in a wastewater treatment system that is regulated under the Clean Water Act (CWA), that is CWA-equivalent, or that is injected into a Class I nonhazardous deep injection well, all underlying hazardous constituents (as defined in § 268.2(i)) must meet Universal Treatment Standards, found in § 268.48, Table Universal Treatment Standards, prior to land disposal as defined in § 268.2(c) of this part.

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

(g) Between August 26, 1996 and March 4, 1999 the treatment standards for the wastes specified in 40 CFR 261.32 as EPA Hazardous Waste numbers K156-K161; and in 40 CFR 261.33 as EPA Hazardous Waste numbers P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U277-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U400-U404, U407, and U409-U411; and soil contaminated with these wastes; may be satisfied by either meeting the constituent concentrations presented in the table “Treatment Standards for Hazardous Wastes” in this section, or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST at § 268.42 Table 1, for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at § 268.42 Table 1, for wastewaters.

(h) Prohibited D004-D011 mixed radioactive wastes and mixed radioactive listed wastes containing metal constituents, that were previously treated by stabilization to the treatment standards in effect at that time and then put into storage, do not have to be re-treated to meet treatment standards in this section prior to land disposal.

(i) [Reserved]

(j) Effective September 4, 1998, the treatment standards for the wastes specified in 40 CFR 261.33 as EPA Hazardous Waste numbers P185, P191, P192, P197, U364, U394,

and U395 may be satisfied by either meeting the constituent concentrations presented in the table “Treatment Standards for Hazardous Wastes” in this section, or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST at § 268.42 Table 1 of this Part, for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at § 268.42 Table 1 of this Part, for wastewaters.

[See Treatment Standards for Hazardous Wastes Table in 40 CFR section 268.40.1](#)

FOOTNOTES TO TREATMENT STANDARD TABLE 268.40

- 1 The waste descriptions provided in this table do not replace waste descriptions in 40 CFR 261. Descriptions of Treatment/Regulatory Subcategories are provided, as needed, to distinguish between applicability of different standards.
- 2 CAS means Chemical Abstract Services. When the waste code and/or regulated constituents are described as a combination of a chemical with its salts and/or esters, the CAS number is given for the parent compound only.
- 3 Concentration standards for wastewaters are expressed in mg/L and are based on analysis of composite samples.
- 4 All treatment standards expressed as a Technology Code or combination of Technology Codes are explained in detail in 40 CFR 268.42 Table 1— Technology Codes and Descriptions of Technology-Based Standards.
- 5 Except for Metals (EP or TCLP) and Cyanides (Total and Amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated in accordance with the technical requirements of 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.
- 6 [Reserved]
- 7 Both Cyanides (Total) and Cyanides (Amenable) for nonwastewaters are to be analyzed using Method 9010C or 9012B, found in “Test Methods’ for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846, 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.
- 8 These wastes, when rendered nonhazardous and then subsequently managed in CWA, or CWA-equivalent systems are not subject to treatment standards. (See § 268.1(c)(3) and (4)).
- 9 These wastes, when rendered nonhazardous and then subsequently injected in a Class SDWA well, are not subject to treatment standards. (See § 148.1(d)).
- 10 The treatment standard for this waste may be satisfied by either meeting the constituent concentrations in this table or by treating the waste by the specified technologies: combustion, as defined by the technology code CMBST at § 268.42 Table 1 of this Part, for nonwastewaters; and biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or

combustion as defined as technology code CMBST at § 268.42 Table 1 of this Part, for wastewaters.

- 11 For these wastes, the definition of CMBST is limited to: (1) combustion units operating under 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\(b\) \[federal\]](#).
- 12 Disposal of K175 wastes that have complied with all applicable 40 CFR 268.40 treatment standards must also be macroencapsulated in accordance with 40 CFR 268.45 Table 1 unless the waste is placed in:
 - (1) A Subtitle C monofill containing only K175 wastes that meet all applicable 40 CFR 268.40 treatment standards; or
 - (2) A dedicated Subtitle C landfill cell in which all other wastes being co-disposed are at $\text{pH} \leq 6.0$.

§ 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.

§ 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 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.

[\[See Table 1—Technology Codes and Description of Technology-Based Standards in 40 CFR section 268.42.\]](#)

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(b) [Subsection excluded from incorporation; excluded text not reproduced.]

(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.

§ 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.

§ 268.45 Treatment standards for hazardous debris.

(a) Treatment standards. Hazardous debris must be treated prior to land disposal as follows unless [the] state department of health 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 Characteristic (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.

(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.

[\[See Table 1—Alternative Treatment Standards for Hazardous Debris in 40 CFR section 268.45.\]](#)

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§ 268.46 Alternative treatment standards based on HTMR.

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

§ 268.48 Universal treatment standards.

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

[\[See Universal Treatment Standards Table in 40 CFR section 268.48.\]](#)

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.
- 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 9010C or 9012B, 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 [Reserved]
- 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 treatment selenium waste would always be characteristically hazardous, unless it is treated to below its characteristic level.
- 8 This standard is temporarily deferred for soil exhibiting a hazardous characteristic due to D004-D011 only.

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§ 268.49 Alternative LDR treatment standards for contaminated soil.

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

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

*For dates of LDR applicability, see 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 \[federal\]](#).

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

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

(C) When treatment of any constituent subject to treatment to a 90 percent reduction standard would result in a concentration less than 10 times the Universal Treatment Standard for that constituent, treatment to achieve constituent concentrations less than 10 times the universal treatment

standard is not required. Universal Treatment Standards are identified in 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 nonanalyzable constituents:

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

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

(d) Constituents subject to treatment. When applying the soil treatment standards in paragraph (c) of this section, constituents subject to treatment are any constituents listed in § 268.48 Table UTS-Universal Treatment Standards that are reasonably expected to be present in any given volume of contaminated soil, except fluoride, selenium, sulfides, vanadium, zinc, and that are present at concentrations greater than ten times the universal treatment standard. PCBs are not constituent subject to treatment in any given volume of soil which exhibits the toxicity characteristic solely because of the presence of metals.

(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.

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 §§ 262.16 and 262.17 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 with:

(A) The words "Hazardous Waste";

(B) The applicable EPA hazardous waste number(s) (EPA hazardous waste codes) in subparts C and D of part 261 of this chapter; or use a nationally recognized electronic system, such as bar coding, to identify the EPA hazardous waste number(s);

(C) An indication of the hazards of the contents (examples include, but are not limited to, the applicable hazardous waste characteristic(s) (i.e., ignitable, corrosive, reactive, toxic); hazard communication consistent with the Department of Transportation requirements at 49 CFR part 172 subpart E (labeling) or subpart F (placarding); a hazard statement or pictogram consistent with the Occupational Safety and Health Administration Hazard Communication Standard at 29 CFR 1910.1200; or a chemical hazard label consistent with the National Fire Protection Association code 704); and

(D) 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 state department of health can demonstrate that such storage was not solely for the purpose of accumulation of such quantities of hazardous waste as are necessary to facilitate proper recovery, treatment, or disposal.

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

(d) If a generator's waste is exempt from a prohibition on the type of land disposal utilized for the waste (for example, because of an approved case-by-case extension under § 268.5 [federal], an approved § 268.6 [federal] 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 [federal], 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.

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

Appendixes I-II to Part 268 [Reserved]

[Appendix III to Part 268—List of Halogenated Organic Compounds Regulated Under § 268.32](#)

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.

Appendix V to Part 268 [Reserved]

[Appendix VI to Part 268—Recommended Technologies To Achieve Deactivation of Characteristics in Section 268.42](#)

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

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Appendix VIII to Part 268—LDR Effective Dates of Injected Prohibited Hazardous Wastes

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Appendix IX to Part 268—Extraction Procedure (EP) Toxicity Test Method and Structural Integrity Test (Method 1310B)

Note: The EP (Method 1310B) 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.

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\(c\)](#)