

US EPA ARCHIVE DOCUMENT

CHAPTER 50 LAND DISPOSAL RESTRICTIONS**5000 GENERAL**

- 5000.1 This chapter identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances under which an otherwise prohibited waste may continue to be land disposed. The land disposal of hazardous waste is prohibited in the District; however, these provisions have been included for the convenience of the regulated community who send their wastes outside of the District for treatment or disposal. In addition, these regulations contain specific generation, treatment, and storage requirements that are applicable to hazardous waste generators and handlers in the District. Those provisions addressing the treatment, storage, or disposal of hazardous waste in a landfill or surface impoundment refer to units located outside the District as these activities are prohibited inside the District.
- 5000.2 Except as specifically provided otherwise in this chapter or Chapter 41 of this subtitle, the requirements of this chapter apply to persons who generate or transport hazardous waste and owners and operators of hazardous waste treatment, storage, and disposal facilities. Within the District, wastes regulated under §4102 are subject to the requirements of this chapter.
- 5000.3 Restricted wastes may continue to be land disposed as follows:
- (a) Where persons have been granted an extension to the effective date of a prohibition under §5002 or pursuant to §5000.12, with respect to those wastes covered by the extension;
 - (b) Where persons have been granted an exemption from a prohibition pursuant to a petition under §5000.13, with respect to those wastes and units covered by the petition;
 - (c) Wastes that are hazardous only because they exhibit a hazardous characteristic, and that are otherwise prohibited under this chapter, or 40 CFR part 148, are not prohibited if the wastes:
 - (1) Are disposed into a nonhazardous or hazardous injection well, outside the District, as defined under 40 CFR 144.6(a); and
 - (2) Do not exhibit any prohibited characteristic of hazardous waste identified in §4108 at the point of injection and this injection takes place outside the District; and
 - (d) Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under this chapter, are not prohibited if the wastes meet any of the following criteria, unless the wastes are subject to a specified method of treatment other than DEACT in §5003, or are D003 reactive cyanide:
 - (1) The wastes are managed in a treatment system that subsequently discharges to waters of the U.S. pursuant to a permit issued under §§3 and 7 of the Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Code §§6-922 and 6-926, 1995 Repl. Vol.); or

- (2) The wastes are treated for purposes of the pretreatment requirements of the Wastewater System Regulation Amendment Act of 1985, effective March 26, 1986 (D.C. Code §§6-951 *et seq.*, 1995 Repl. Vol.); or
 - (3) The wastes are managed in a zero discharge system engaged in the Federal Clean Water Act-equivalent treatment as defined in §5002.5(a); and
 - (4) The wastes no longer exhibit a prohibited characteristic at the point of land disposal (for example, placement in a surface impoundment outside the District).
- 5000.4 The requirements of this chapter shall not affect the availability of a waiver under §121(d)(4) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).
- 5000.5 The following hazardous wastes are not subject to any provision of Chapter 50:
- (a) Waste pesticides that a farmer disposes of pursuant to §4206.1;
 - (b) Wastes identified or listed as hazardous after November 8, 1984, for which EPA has not promulgated land disposal prohibitions or treatment standards;
 - (c) 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 (for example, 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; and
 - (d) Land disposal prohibitions for hazardous characteristic wastes do not apply to laboratory wastes displaying the characteristic of ignitability (D001), corrosivity (D002), or organic toxicity (D012-D043), that are mixed with other plant wastewaters at facilities whose ultimate discharge is subject to regulation under the CWA (including wastewaters at facilities which have eliminated the discharge of wastewater), provided that the annualized flow of laboratory wastewater into the facility's headworks does not exceed one per cent, or provided that the laboratory wastes' combined annualized average concentration does not exceed one part per million in the facility's headworks.
- 5000.6 Except as specified at §4800.2 for pesticide waste, universal waste handlers and universal waste transporters (as defined in §5400.1) handling waste destined for disposal are subject to full regulation under this chapter and under Chapters 42 through 46 rather than the reduced requirements of Chapter 48. Specific hazardous wastes that are considered universal wastes are listed below.
- (a) Batteries as described in §§4800.3 through 4800.7:

- (b) Pesticides as described in §§4800.8 through 4800.12;
 - (c) Thermostats as described in §§4800.13 through 4800.16; and
 - (d) Mercury-containing lamps as described in §4806.
- 5000.7 Except as provided in §5000.8, 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 §5003, to circumvent the effective date of a prohibition in §5002, to otherwise avoid a prohibition in §5002, or to circumvent a land disposal prohibition imposed by RCRA §3004.
- 5000.8 Dilution of wastes that are hazardous only because they exhibit a characteristic in treatment systems that include land-based units that treat wastes subsequently discharged to a water of the United States pursuant to a permit issued under §§3 and 7 of the Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Code §§6-922 and 6-926, 1995 Repl. Vol.), or that treat wastes in a Federal CWA-equivalent treatment system, or that treat wastes for the purposes of pretreatment requirements under the Wastewater System Regulation Amendment Act of 1985, effective March 26, 1986 (D.C. Code §§6-951 *et seq.*, 1995 Repl. Vol.) is not impermissible dilution for purposes of §§5000.7 through 5000.9 unless a method other than DEACT has been specified in §5003 as the treatment standard, or unless the waste is a D003 reactive cyanide wastewater or nonwastewater.
- 5000.9 Combustion of the hazardous waste codes listed in Appendix XI of 40 CFR Part 268, as incorporated by reference at §5005.1(j), is prohibited, unless the waste, at the point of generation, or after any bona fide treatment such as cyanide destruction before combustion, can be demonstrated to comply with one or more of the following criteria (unless otherwise specifically prohibited from combustion):
- (a) The waste contains hazardous organic constituents or cyanide at levels exceeding the constituent-specific treatment standard found in the Universal Treatment Standards table in 40 CFR 268.48, as incorporated by reference at §5003.13;
 - (b) The waste consists of organic, debris-like materials (for example, wood, paper, plastic, or cloth) contaminated with an inorganic metal-bearing hazardous waste;
 - (c) The waste, at point of generation, has reasonable heating value such as greater than or equal to 5000 BTU per pound;
 - (d) The waste is co-generated with wastes for which combustion is a required method of treatment;
 - (e) The waste is subject to Federal or District requirements necessitating reduction of organics (including biological agents); or
 - (f) The waste contains greater than 1% Total Organic Carbon (TOC).
- 5000.10 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.

- 5000.11 Wastes that are otherwise prohibited from land disposal under this chapter shall not be treated in a surface impoundment within the District, but may be treated by surface impoundment outside the District. For the regulations applying to treatment in a surface impoundment, see 40 CFR 268.4.
- 5000.12 Procedures for case-by-case extensions to an effective date are as follows:
- (a) Any person who generates, treats, stores, or disposes of a hazardous waste may submit an application to the Administrator for an extension to the effective date of any applicable restriction established under §5002. The applicant shall demonstrate the following:
- (1) He or she has made a good-faith effort to locate and contract with treatment, recovery, or disposal facilities nationwide to manage his or her waste in accordance with the effective date of the applicable restriction established under §5002;
 - (2) He or she has entered into a binding contractual commitment to construct or otherwise provide alternative treatment, recovery (for example, recycling), or disposal capacity that meets the treatment standards specified in §5003 or, where treatment standards have not been specified, the treatment, recovery, or disposal capacity is protective of human health and the environment;
 - (3) Due to circumstances beyond the applicant's control, this alternative capacity cannot reasonably be made available by the applicable effective date. This demonstration may include a showing that the technical and practical difficulties associated with providing the alternative capacity will result in the capacity not being available by the applicable effective date;
 - (4) The capacity being constructed or otherwise provided by the applicant will be sufficient to manage the entire quantity of waste that is the subject of the application;
 - (5) He or she provides a detailed schedule for obtaining required operating and construction permits or an outline of how and when alternative capacity will be available;
 - (6) He or she has arranged for adequate capacity to manage his or her waste during an extension and has documented in the application the location of all sites at which the waste will be managed; and
 - (7) Any waste managed in a surface impoundment or landfill (prohibited in the District) during the extension period will meet the requirements of §5000.12(h)(2);

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- (b) An authorized representative signing an application described under §5000.12(a) shall make the following certification:

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

- (c) After receiving an application for an extension, the Administrator may request any additional information that he or she deems necessary to evaluate the application;
- (d) An extension will apply only to the waste generated at the individual facility covered by the application and will not apply to restricted waste from any other facility;
- (e) Based on information referred to in §5000.12(a), after notice and opportunity for comment, and after consultation with appropriate State agencies in all affected States, the Administrator may grant an extension of up to one (1) year from the effective date. The Administrator may renew this extension for up to one (1) additional year upon the request of the applicant if the demonstration required in §5000.12(a) can still be made. In no event will an extension extend beyond twenty-four (24) months from the applicable effective date specified in §5002. The length of any extension authorized will be determined by the Administrator based on the time required to construct or obtain the type of capacity needed by the applicant as described in the completion schedule discussed in §5000.12(a)(5). The Administrator will give public notice of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a petition will be published in the Federal Register;
- (f) Any person granted an extension under §5000.12 shall immediately notify the Administrator as soon as he or she has knowledge of any change in the conditions certified to in the application;
- (g) Any person granted an extension under §5000.12 shall submit written progress reports at intervals designated by the Administrator. The reports shall describe the overall progress made toward constructing or otherwise providing alternative treatment, recovery or disposal capacity; shall identify any event that may cause or has caused a delay in the development of the capacity; and shall summarize the steps taken to mitigate the delay. The Administrator can revoke the extension at any time if the applicant does not demonstrate a good-faith effort to meet the schedule for completion, if the Agency denies or revokes any required permit, if conditions certified in the application change, or for any violation of this subtitle;
- (h) Whenever the Administrator establishes an extension to an effective date under §5000.12, during the period for which the extension is in effect:
- (1) The storage restrictions under §5004.1 do not apply;
 - (2) The hazardous waste may be disposed in a landfill or surface impoundment outside the District only if the unit is in compliance with the technical

requirements of the following provisions regardless of whether the unit is existing, new, or a replacement or lateral expansion. The following requirements must be met by these units:

- (A) The landfill, if in interim status, is in compliance with the requirements of subpart F of 40 CFR part 265 and 40 CFR 265.301 (a), (c), and (d) or their State equivalent;
- (B) The landfill, if permitted, is in compliance with the requirements of 40 CFR subpart F of part 40 CFR 264 and 40 CFR 264.301 (c), (d) and (e), or their State equivalent;
- (C) The surface impoundment, if in interim status, is in compliance with the requirements of 40 CFR subpart F of part 265, 40 CFR 265.221 (a), (c), and (d), or their State equivalent; or
- (D) The surface impoundment, if permitted, is in compliance with the requirements of subpart F of 40 CFR part 264 and 40 CFR 264.221 (c), (d) and (e), or their State equivalent;
- (E) The surface impoundment, if newly subject to RCRA §3005(j)(1) due to the promulgation of additional listings or characteristics for the identification of hazardous waste, is in compliance with the requirements of subpart F of 40 CFR part 265, or its State equivalent, within twelve (12) months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of 40 CFR 265.221 (a), (c) and (d) or their State equivalent, within forty-eight (48) months after the promulgation of additional listings or characteristics of hazardous waste. If a national capacity variance is granted, during the period the variance is in effect, the surface impoundment, if newly subject to RCRA §3005(j)(1) due to the promulgation of additional listings or characteristics of hazardous waste, is in compliance with the requirements of subpart F of 40 CFR part 265, or its State equivalent, within twelve (12) months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of 40 CFR 265.221 (a), (c) and (d), or their State equivalent, within forty-eight (48) months after the promulgation of additional listings or characteristics of hazardous waste; or
- (F) The landfill, if disposing of containerized liquid hazardous wastes containing PCBs at concentrations greater than or equal to fifty (50) ppm but less than five hundred (500) ppm, is also in compliance with the requirements of 40 CFR 761.75 and 40 CFR parts 264 and 265, or their State equivalent; and
 - (i) Pending a decision on the application the applicant is required to comply with all restrictions on land disposal under 40 CFR part 268 or State equivalent, once the effective date for the waste has been reached.

5000.13 Petitions to allow land disposal of a waste prohibited under §5002 are regulated as follows:

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- (a) Any person seeking an exemption from a prohibition under §5002 for the disposal of a restricted hazardous waste in a particular unit or units shall submit a petition to the Administrator demonstrating, to a reasonable degree of certainty, that there will be no migration of hazardous constituents from the disposal unit or injection zone for as long as the wastes remain hazardous. The demonstration shall include the following components:
- (1) An identification of the specific waste and the specific unit for which the demonstration will be made;
 - (2) A waste analysis to describe fully the chemical and physical characteristics of the subject waste;
 - (3) A comprehensive characterization of the disposal unit site including an analysis of background air, soil, and water quality;
 - (4) A monitoring plan that detects migration at the earliest practicable time;
 - (5) Sufficient information to assure the Administrator that the owner or operator of a land disposal unit receiving restricted waste(s) will comply with other applicable Federal, State, and District laws; and
- (b) The demonstration referred to in §5000.13(a) shall meet the following criteria:
- (1) All waste and environmental sampling, test, and analysis data shall be accurate and reproducible to the extent that state-of-the-art techniques allow;
 - (2) All sampling, testing, and estimation techniques for chemical and physical properties of the waste and all environmental parameters shall have been approved by the Administrator;
 - (3) Simulation models shall be calibrated for the specific waste and site conditions, and verified for accuracy by comparison with actual measurements;
 - (4) A quality assurance and quality control plan that addresses all aspects of the demonstration shall be approved by the Administrator; and
 - (5) An analysis shall be performed to identify and quantify any aspects of the demonstration that contribute significantly to uncertainty. This analysis shall include an evaluation of the consequences of predictable future events, including, but not limited to, earthquakes, floods, severe storm events, droughts, or other natural phenomena; and
- (c) Each petition referred to in §5000.13(a) shall include the following:
- (1) A monitoring plan that describes the monitoring program installed at or around the unit to verify continued compliance with the conditions of the variance. This monitoring plan shall provide information on the monitoring of the unit or the environment around the unit. The following specific information shall be included in the plan:

- (A) The media monitored in the cases where monitoring of the environment around the unit is required;
 - (B) The type of monitoring conducted at the unit, in the cases where monitoring of the unit is required;
 - (C) The location of the monitoring stations;
 - (D) The monitoring interval (frequency of monitoring at each station);
 - (E) The specific hazardous constituents to be monitored;
 - (F) The implementation schedule for the monitoring program;
 - (G) The equipment used at the monitoring stations;
 - (H) The sampling and analytical techniques employed; and
 - (I) The data recording/reporting procedures.
- (2) Where applicable, the monitoring program described in §5000.13(c)(1) shall be in place for a period of time specified by the Administrator, as part of his or her approval of the petition, before receipt of prohibited waste at the unit;
 - (3) The monitoring data collected according to the monitoring plan specified under §5000.13(c)(1) shall be sent to the Administrator according to a format and schedule specified and approved in the monitoring plan;
 - (4) A copy of the monitoring data collected under the monitoring plan specified under §5000.13(c)(1) shall be kept on-site at the facility in the operating record;
 - (5) The monitoring program specified under §5000.13(c)(1) meet the following criteria:
 - (A) All sampling, testing, and analytical data shall be approved by the Administrator and shall provide data that is accurate and reproducible;
 - (B) All estimation and monitoring techniques shall be approved by the Administrator;
 - (C) A quality assurance and quality control plan addressing all aspects of the monitoring program shall be provided to and approved by the Administrator; and
- (d) Each petition shall be submitted to the Administrator;
 - (e) After a petition has been approved, the owner or operator shall report any changes in conditions at the unit or the environment around the unit that significantly depart from the conditions described in the variance and affect the potential for migration of hazardous constituents from the units as follows:

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- (1) If the owner or operator plans to make changes to the unit design, construction, or operation, the change shall be proposed, in writing, and the owner or operator shall submit a demonstration to the Administrator at least thirty (30) days prior to making the change. The Administrator shall determine whether the proposed change invalidates the terms of the petition and shall determine the appropriate response. Any change shall be approved by the Administrator before being made;
 - (2) If the owner or operator discovers that a condition at the site that was modeled or predicted in the petition does not occur as predicted, this change shall be reported, in writing, to the Administrator within ten (10) days of discovering the change. The Administrator shall determine whether the reported change from the terms of the petition requires further action, which may include termination of waste acceptance and revocation of the petition, petition modifications, or other responses;
- (f) If the owner or operator determines that there is migration of hazardous constituent(s) from the unit, the owner or operator shall:
- (1) Immediately suspend receipt of prohibited waste at the unit;
 - (2) Notify the Administrator, in writing, within ten (10) days of the determination that a release has occurred;
 - (3) Following receipt of the notification the Administrator shall determine, within sixty (60) days of receiving notification, whether the owner or operator can continue to receive prohibited waste in the unit and whether the variance is to be revoked. The Administrator shall also determine whether further examination of any migration is warranted under applicable provisions of Chapter 44 or 40 CFR part 265 as required under §4401 or their state equivalent if outside the District;
- (g) Each petition shall include the following statement signed by the petitioner or an authorized representative:
- I certify under penalty of law that I have personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment;
- (h) After receiving a petition, the Administrator may request any additional information that reasonably may be required to evaluate the demonstration;
- (i) If approved, the petition shall apply to land disposal of the specific restricted waste at the individual disposal unit described in the demonstration and shall not apply to any other restricted waste at that disposal unit, or to that specific restricted waste at any other disposal unit;
- (j) The Administrator shall give public notice in the Federal Register of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a petition shall be published in the Federal Register;

- (k) The term of a petition granted under §5000.13 shall be no longer than the term of the TSD facility permit if the disposal unit is operating under a TSD facility permit, or up to a maximum of ten (10) years from the date of approval provided under §5000.13(g) if the unit is operating under interim status. In either case, the term of the granted petition shall expire upon the termination or denial of a TSD facility permit, or upon the termination of interim status or when the volume limit of waste to be land disposed during the term of petition is reached;
- (l) Before the Administrator's decision, the applicant is required to comply with all restrictions on land disposal under 40 CFR part 268 once the effective date for the waste has been reached;
- (m) The petition granted by the Administrator does not relieve the petitioner of his or her responsibilities in the management of hazardous waste under 40 CFR part 271 and Chapters 40 through 46 and 50 of this subtitle; and
- (n) Liquid hazardous wastes containing polychlorinated biphenyls at concentrations greater than or equal to five hundred (500) ppm are not eligible for an exemption under §5000.13.

5000.14 Testing, tracking, and recordkeeping requirements for generators are as follows:

- (a) 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 §§5003.1, 5003.12, or 5003.14. This determination can be made in either of two ways: testing the waste or using knowledge of the waste. If the generator tests the waste, testing would normally determine the total concentration of hazardous constituents, or the concentration of hazardous constituents in an extract of the waste obtained using test method 1311 in "Test Methods of Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as referenced at §4017(o), depending on whether the treatment standard for the waste is expressed as a total concentration or concentration of hazardous constituent in the waste's extract. In addition, some hazardous wastes must be treated by particular treatment methods before they can be land disposed and some soils are contaminated by such hazardous wastes. These treatment standards are also found in §5003, and are described in detail in §5003.10, Table 3. 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, he or she must comply with the special requirements of §5000.9 in addition to any applicable requirements in §§5000.14 through 5000.17;
- (b) If the waste or contaminated soil does not meet the treatment standard: with the initial shipment of waste to each treatment or storage facility, the generator must send a one-time written notice to each treatment or storage facility receiving the waste, and place a copy in the file. The notice shall include the information in column "§5000.14(b)" of the Generator Paperwork Requirements Table in §5000.14(d). No further notification is necessary until such time that the waste or facility change, in which case a new notification shall be sent and a copy placed in the generator's file.

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

I certify under penalty of law that I personally have examined this contaminated soil and it [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and requires treatment to meet the soil treatment standards as provided by §5003.14.

- (2) [Reserved]

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

- (1) With the initial shipment of waste to each treatment, storage, or disposal facility, the generator shall 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 shall include the information indicated in column "§5000.14(c)" of the Generator Paperwork Requirements Table in §5000.14(d) 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 §5003. 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.

- (2) 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 "§5000.14(c)" of the Generator Paperwork Requirements Table in §5000.14(d);and

- (d) 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 §5000.12, disposal in a no-migration unit under §5000.13, or a national capacity variance or case-by-case capacity variance under §5002. If a generator's waste is so exempt, then with the initial shipment of waste, the generator shall send a one-time written notice to each land disposal facility receiving the waste. The notice shall include the information indicated in column "§5000.14(d)" of the Generator Paperwork Requirements Table below. If the waste changes, the generator shall send a new notice to the receiving facility, and place a copy in his or her files;

Table 1 -- Generator Paperwork Requirements Table

Require information	§5000.14(b)	§5000.14(c)	§5000.14(d)	§5000.14(i)
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 Land Disposal Restrictions (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 §5400.1) 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 §5003.12: the contaminants subject to treatment, as described in §5003.12(b); and an indication that these contaminants are being treated to comply with §5003.12	✓		✓	
8. For contaminated soil subject to LDRs as provided in §5003.14(a), the constituents subject to treatment as described in §5003.14(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 §5003.14(c) or the universal treatment standards		✓		
9. A certification is needed (see applicable certification in 5000.14 for exact wording)		✓		✓

- (e) If a generator is managing and treating prohibited waste or contaminated soil in tanks, containers, or containment buildings regulated under §§4202.6 through 4202.8 to meet applicable Land Disposal Restriction (LDR) treatment standards found at §5003, the generator must develop and follow a written waste analysis plan that describes the procedures he or she will carry out to comply with the treatment standards. (Generators treating hazardous debris under the alternative treatment standards of Table 5, §5003.12, however, are not subject to these waste analysis requirements.) The plan shall be kept on site in the generator's records, and shall meet the following requirements:
- (1) The waste analysis plan shall be based on a detailed chemical and physical analysis of a representative sample of the prohibited waste(s) being treated, and contain all information necessary to treat the waste(s) in accordance with the requirements of this chapter, including the selected testing frequency;
 - (2) The plan shall be kept in the facility's on-site files and made available to inspectors;
 - (3) Wastes shipped off-site pursuant to §5000.14(e) shall comply with the notification requirements of §5000.14(c);
- (f) 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 shall

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 §4017(o) of this subtitle, and all waste analysis data shall be retained on-site in the generator's files;

- (g) If a generator determines that he or she is managing a prohibited waste that is excluded from the definition of hazardous or solid waste or is exempted under §§4100.4 through 4103.7 subsequent to the point of generation (including deactivated characteristic hazardous wastes managed in wastewater treatment systems subject to §§3 and 7 of the Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Code §6-922 and 926, 1995 Repl. Vol.)) as specified at §4101.1(c) or that are CWA-equivalent, he or she shall place a one-time notice describing the generation, subsequent exclusion from the definition of hazardous or solid waste or exemption from HWMA, and the disposition of the waste, in the facility's on-site files;
- (h) Generators shall retain on-site a copy of all notices, certifications, waste analysis data, and other documentation produced pursuant to §§5000.14 through 5000.18 for at least three (3) years from the date that the waste that is the subject of the documentation was last sent to on-site or off-site treatment, storage, or disposal. The three (3)-year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Administrator. The requirements of §5000.14(h) apply to solid wastes even when the hazardous characteristic is removed before disposal, or when the waste is excluded from the definition of hazardous or solid waste under §§4100.4 through 4103.7, or exempted from HWMA regulation, subsequent to the point of generation;
- (i) If a generator is managing a lab pack containing hazardous wastes and wishes to use the alternative treatment standard for lab packs found at §5003.10(d), he or she shall meet the following requirements:
- (1) With the initial shipment of waste to a treatment facility, the generator shall submit a notice that provides the information in column "§5000.14(i)" in the Generator Paperwork Requirements Table of §5000.14(d), and the following certification. The certification, which shall be signed by an authorized representative and shall be placed in the generator's files, shall 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 40 CFR Part 268, Appendix IV as incorporated by reference at §5005.1(d) and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at §5003.10(d). I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment;
 - (2) No further notification is necessary until the wastes in the lab pack change or the receiving facility changes, in which case a new notice and certification shall be sent and a copy placed in the generator's file;

- (3) If the lab pack contains characteristic hazardous wastes (D001-D043), underlying hazardous constituents (as defined in §5400.1) need not be determined; and
- (4) The generator shall also comply with the requirements in §5000.14(f)&(g).

5000.15 Testing, tracking, and recordkeeping requirements for treatment facilities are as follows:

- (a) Treatment facilities shall test their wastes according to the frequency specified in their waste analysis plans as required by §§4403.1 through 4403.6 (for permitted TSDs) or 40 CFR 265.13 subject to the restrictions of §4401.2(k) (for interim status facilities). The testing shall be performed as follows:
 - (1) For wastes or contaminated soil with treatment standards expressed in the waste extract (TCLP), the owner or operator of the treatment facility shall 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 §4017(o) of this subtitle) 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 shall test the treatment residues (not an extract of the residues) to assure that they meet the applicable treatment standards;
 - (3) A one-time notice shall be sent with the initial shipment of waste or contaminated soil to the land disposal facility. A copy of the notice shall be placed in the treatment facility's file. Additional requirements include:
 - (A) No further notification is necessary until the waste or receiving facility change, in which case a new notice shall be sent and a copy placed in the treatment facility's file;
 - (B) The one-time notice shall include the requirements in Table 2;

Table 2 -- Treatment Facility Paperwork Requirements Table

Required information	§5000.15
1. EPA Hazardous Waste Numbers and Manifest Number of first shipment	
2. The waste is subject to the LDRs. The constituents of concern for F001-F005, and F039, and underlying hazardous constituents in characteristic wastes, unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the LDR notice	✓
3. The notice must include the applicable wastewater/nonwastewater category (see §5400.1) 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 §5003.14(a), the constituents subject to treatment as described in §5003.14(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 as provided by §5003.14(c)	
6. A certification statement is needed (see applicable certifications in 5000.15 for exact wording)	✓

- (4) The treatment facility shall 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 shall 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 §5003 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; and

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 §5003.14 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.

- (5) Other specific requirements for the §5000.15(a)(4) certification include:
 - (A) A copy of the certification in §5000.15(a)(4) shall 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 shall be sent to the receiving facility, and a copy placed in the file;
 - (B) Debris excluded from the definition of hazardous waste under §4100.17 (for example, debris treated by an extraction or destruction technology provided by Table 5, §5003.12, and debris that the Director has determined does not

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contain hazardous waste), however, is subject to the notification and certification requirements of §5000.17 rather than the certification requirements of §5000.15(a)(4);

- (C) 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 §5003.4, the certification, signed by an authorized representative, shall 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 §5003.10(b), Table 3. I have been unable to detect the nonwastewater organic constituents, despite having used best good-faith efforts to analyze for these constituents. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment;

- (D) For characteristic wastes that are subject to the treatment standards in §5003 (other than those expressed as a required method of treatment) that are reasonably expected to contain underlying hazardous constituents as defined in §5400.1; are treated on-site to remove the hazardous characteristic; and are then sent off-site for treatment of underlying hazardous constituents, the certification shall state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of §5003 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet universal treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment;

- (E) For characteristic wastes that contain underlying hazardous constituents as defined §5004.1 that are treated on-site to remove the hazardous characteristic to treat underlying hazardous constituents to levels in 40 CFR 268.48 Universal Treatment Standards as incorporated by reference at §5003.13, the certification must state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of §5003 to remove the hazardous characteristic and that underlying hazardous constituents, as defined in §5400.1 have been treated on-site to meet the Universal Treatment Standards as incorporated by reference at §5003.13. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment;

- (6) 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 shall comply with the notice and certification requirements applicable to generators under §5000.14; and
 - (7) Where the wastes are recyclable materials used in a manner constituting disposal subject to the provisions of §§4502.2 through 4502.3 regarding treatment standards and prohibition levels, the owner or operator of a treatment facility (for example, the recycler) is not required to notify the receiving facility, pursuant to §5000.15(a)(3). With each shipment of the wastes the owner or operator of the recycling facility shall submit a certification described in §5000.15(a)(4), and a notice that includes the information listed in §5000.15(a)(3) (except the manifest number) to the Director, or his delegated representative. The recycling facility shall keep records of the name and location of each entity receiving the hazardous waste-derived product.
- 5000.16 Except where the owner or operator is disposing of any waste that is a recyclable material used in a manner constituting disposal pursuant to §§4502.2 and 4502.3, the owner or operator of any land disposal facility disposing any waste subject to restrictions under this chapter shall:
- (a) Have copies of the notice and certifications specified in §§5000.14 or 5000.15; and
 - (b) 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 §4017(o), to assure that the wastes or treatment residues are in compliance with the applicable treatment standards in §5003. The testing shall be performed according to the frequency specified in the facility's waste analysis plan as required by §§4403.1 through 4403.6 or 40 CFR 265.13 subject to the restrictions of §4401.2(k).
- 5000.17 Generators or treaters who first claim that hazardous debris is excluded from the definition of hazardous waste under §4100.17 (for example, debris treated by an extraction or destruction technology provided by Table 5, §5003.12, and debris that the EPA Regional Administrator (or his or her designated representative) or State authorized to implement Chapter 50 requirements has determined does not contain hazardous waste) are subject to the following notification and certification requirements:
- (a) A one-time notification, including the following information, shall be submitted to the EPA Regional hazardous waste management division director (or his or her designated representative) or State authorized to implement Chapter 50 requirements:
 - (1) The name and address of the RCRA Subtitle D facility receiving the treated debris;
 - (2) A description of the hazardous debris as initially generated, including the applicable EPA Hazardous Waste Number(s); and

- (3) For debris excluded under §4100.17(a), the technology from Table 5, §5003.12, used to treat the debris;
- (b) The notification shall be updated if the debris is shipped to a different facility, and, for debris excluded under §4100.17(a), if a different type of debris is treated or if a different technology is used to treat the debris; and
- (c) For debris excluded under §4100.17(a), the owner or operator of the treatment facility shall document and certify compliance with the treatment standards of Table 5, §5003.12, as follows:
 - (1) Records shall be kept of all inspections, evaluations, and analyses of treated debris that are made to determine compliance with the treatment standards;
 - (2) Records shall 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
 - (3) For each shipment of treated debris, a certification of compliance with the treatment standards shall be signed by an authorized representative and placed in the facility's files. The certification shall state the following:

I certify under penalty of law that the debris has been treated in accordance with the requirements of §5003.12. I am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment.

- 5000.18 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 §5003.14(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 §5003.14(a) no longer exhibits a characteristic of hazardous waste shall:
- (a) Prepare a one-time only documentation of these determinations including all supporting information; and
 - (b) Maintain that information in the facility files and other records for a minimum of three (3) years.
- 5000.19 Special rules regarding wastes that exhibit a characteristic are as follows:
- (a) The initial generator of a solid waste shall determine each EPA Hazardous Waste Number (waste code) applicable to the waste in order to determine the applicable treatment standards under §5003. For purposes of Chapter 50, the waste will carry the waste code for any applicable listed waste (§§4109 through 4111). In addition, where the waste exhibits a characteristic, the waste will carry one or more of the characteristic waste codes (§4108), except when the treatment standard for the listed waste operates in lieu of the treatment standard for the characteristic waste, as specified in §5000.19(b). If the generator determines that his or her waste displays a hazardous characteristic (and is not D001 nonwastewaters treated by CMBST, RORGS, OR

POLYM of §5003.10(b), Table 3), the generator shall determine the underlying hazardous constituents (as defined at §5400.1) in the characteristic waste;

- (b) Where a prohibited waste is both listed under §§4109 through 4111 and exhibits a characteristic under §4108, the treatment standard for the waste code listed in §§4109 through 4111 will operate in lieu of the standard for the waste code under §4108, 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 shall 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 that exhibits a characteristic under §4108 may be land disposed unless the waste complies with the treatment standards under §5003;
- (d) Wastes that exhibit a characteristic are also subject to §§5000.14 through 5000.17 requirements, except that once the waste is no longer hazardous, a one-time notification and certification shall be placed in the generator's or treater's files and sent to the EPA region or authorized state. The notification and certification that is placed in the generator's or treater's files shall be updated if the process or operation generating the waste changes or if the RCRA facility receiving the waste changes. However, the generator or treater need only notify the EPA region or an authorized state on an annual basis if changes occur. Notification and certification should be sent to the EPA region or authorized state by the end of the calendar year, but no later than December 31. The following requirements apply:
 - (1) The notification shall include the following information:
 - (A) Name and address of the RCRA facility receiving the waste shipment; and
 - (B) 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 §5400.1), 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 shall be signed by an authorized representative and shall state the language found in §5000.15(a)(5). If treatment removes the characteristic but does not treat underlying hazardous constituents, then the certification found in §5000.15(a)(5)(D) applies.

5001 SCHEDULE FOR LAND DISPOSAL PROHIBITION AND ESTABLISHMENT OF TREATMENT STANDARDS

5001.1 Section 5001 defines additional circumstances under which an otherwise prohibited waste may continue to be placed in a surface impoundment outside the District.

- 5001.2 Wastes that are newly identified or listed under RCRA §3001 after November 8, 1984, and stored in a surface impoundment, outside the District, that is newly subject to RCRA Subtitle C or its State equivalent, as a result of the additional identification or listing, may continue to be stored in the surface impoundment, outside the District, for forty-eight (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, outside the District, is in compliance with the requirements of subpart F of 40 CFR part 265, or its State equivalent, within twelve (12) months after promulgation of the new listing or characteristic.
- 5001.3 Wastes that are newly identified or listed under RCRA §3001 after November 8, 1984, and treated in a surface impoundment, outside the District, that is newly subject to the RCRA Subtitle C or its State equivalent, 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 40 CFR part 265, or its State equivalent, within twelve (12) months after the promulgation of the new listing or characteristic. In addition, if the surface impoundment, outside the District, continues to treat hazardous waste after forty-eight (48) months from promulgation of the additional listing or characteristic, it shall then be in compliance with §5000.11 or its State equivalent.

5002 PROHIBITIONS ON LAND DISPOSAL

- 5002.1 The following are waste specific prohibitions for land disposal of wood preserving wastes:
- (a) Effective August 11, 1997, the wastes specified in Chapter 41 as EPA Hazardous Waste numbers F032, F034, and F035 are prohibited from land disposal;
 - (b) Effective May 12, 1999, soil and debris contaminated with F032, F034, F035; and radioactive wastes mixed with EPA Hazardous waste numbers F032, F034, and F035 are prohibited from land disposal;
 - (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, outside the District, only if the unit is in compliance with the requirements specified in §5000.12(h)(2) or its state equivalent;
 - (d) The requirements of §§5002.1(a)&(b) do not apply if:
 - (1) The wastes meet the applicable treatment standards specified in §5003;
 - (2) Persons have been granted an exemption from a prohibition pursuant to a petition under §5000.13, 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 §5003.11; or
 - (4) Persons have been granted an extension to the effective date of a prohibition pursuant to §5000.12, with respect to those wastes covered by the extension; and

- (e) To determine whether a hazardous waste identified in §5002.1 exceeds the applicable treatment standards specified in §5003, the initial generator shall 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 40 CFR Part 268.48 as incorporated by reference at §5003.13, the waste is prohibited from land disposal, and all requirements of Chapter 50 are applicable, except as otherwise specified.

5002.2 The following are waste specific prohibitions for land disposal of dioxin-containing wastes:

- (a) Effective November 8, 1988, the dioxin-containing wastes specified in §§4109.5 through 4109.10 as EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, F027, and F028, are prohibited from land disposal unless 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 the Resource Conservation and Recovery Act (RCRA) or HWMA;
- (b) Effective November 8, 1990, the F020-F023 and F026-F028 dioxin-containing wastes listed in §5002.2(a) are prohibited from land disposal;
- (c) Between November 8, 1988, and November 8, 1990, wastes included in §5002.2(a) may be disposed in a landfill or surface impoundment outside the District only if the unit is in compliance with the requirements specified in §5000.12(h)(2) and all other applicable requirements of Chapter 44 and 40 CFR Part 265, or their State equivalent;
- (d) The requirements of §§5002.2(a)&(b) do not apply if:
 - (1) The wastes meet the standards of §5003; or
 - (2) Persons have been granted an exemption from a prohibition pursuant to a petition under §5000.13, 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 §5000.12, with respect to those wastes covered by the extension.

5002.3 The following are waste specific prohibitions for the land disposal of organobromine wastes:

- (a) Effective November 4, 1998, the waste specified in §4109.11 as EPA Hazardous Wastes Numbers K140, and in §4109.12 as EPA Hazardous waste number U408 are prohibited from land disposal. In addition, soils and debris contaminated with these wastes, radioactive wastes mixed with these hazardous wastes, and soils and debris contaminated with these radioactive mixed wastes, are prohibited from land disposal;
- (b) The requirements of §5002.3(a) do not apply if:
 - (1) The wastes meet the applicable treatment standards specified in §5003;

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- (2) Persons have been granted an exemption from a prohibition pursuant to a petition under §5000.13, 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 §5003.11;
 - (4) Hazardous debris that has met treatment standards in §5003 or in the alternative treatment standards in §5003.12; or
 - (5) Persons have been granted an extension to the effective date of a prohibition pursuant to §5000.12, with respect to these wastes covered by the extension; and
- (c) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in §5003, 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 40 CFR Part 268.48, as incorporated by reference at §5003.13, the waste is prohibited from land disposal, and all requirements of Chapter 50 are applicable, except as otherwise specified.

5002.4 The following are waste specific prohibitions for the land disposal of toxicity characteristic metal wastes:

- (a) Effective August 24, 1998, the following wastes are prohibited from land disposal: the wastes specified in Chapter 41 as EPA Hazardous Waste numbers D004--D011 that are newly identified (for example, wastes, soil, or debris identified as hazardous by the Toxic Characteristic Leaching Procedure but not the Extraction Procedure), and waste, soil, or debris from mineral processing operations that is identified as hazardous by the specifications at Chapter 41;
- (b) Effective May 26, 2000, the following wastes are prohibited from land disposal: newly identified characteristic wastes from elemental phosphorus processing; radioactive wastes mixed with EPA Hazardous wastes D004--D011 that are newly identified (for example, wastes, soil, or debris identified as hazardous by the Toxic Characteristic Leaching Procedure but not the Extraction Procedure); or mixed with newly identified characteristic mineral processing wastes, soil, or debris;
- (c) Between May 26, 1998 and May 26, 2000, newly identified characteristic wastes from elemental phosphorus processing, radioactive waste mixed with D004--D011 wastes that are newly identified (for example, 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 the unit is in compliance with the requirements specified in §5000.12(h)(2);
- (d) The requirements of §§5002.4(a)&(b) do not apply if:
 - (1) The wastes meet the applicable treatment standards specified in §5003;

- (2) Persons have been granted an exemption from a prohibition pursuant to a petition under §5000.13, 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 §5003.11; or
 - (4) Persons have been granted an extension to the effective date of a prohibition pursuant to §5000.12, with respect to these wastes covered by the extension; and
- (e) To determine whether a hazardous waste identified in §5002.4 exceeds the applicable treatment standards specified in §5003, the initial generator shall test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents (including underlying hazardous constituents in characteristic wastes) in excess of the applicable Universal Treatment Standard levels 40 CFR Part 268.48, as incorporated by reference at §5003.13, the waste is prohibited from land disposal, and all requirements of Chapter 50 are applicable, except as otherwise specified.

5002.5 The following are waste specific prohibitions for the land disposal of ignitable and corrosive characteristic wastes whose treatment standards were vacated:

- (a) Effective August 9, 1993, the wastes specified in §§4108.4 and 4108.5 as D001 (and is not in the High TOC Ignitable Liquids Subcategory), and specified in §§4108.6 and 4108.7 as D002, that are managed in systems other than those whose discharge is regulated under §§3 and 7 of the Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Code §§6-922 and 926, 1995 Repl. Vol.), the Wastewater System Regulation Amendment Act of 1985, effective March 26, 1986 (D.C. Code §§6-951 *et seq.*, 1995 Repl. Vol.) or that inject in Class I deep wells regulated under the Federal 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; and
- (b) Effective February 10, 1994, the wastes specified in §§4108.4 and 4108.5 as D001 (and is not in the High TOC Ignitable Liquids Subcategory), and specified in §§4108.6 and 4108.7 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.

5002.6 The following are waste-specific prohibitions for the land disposal of 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 §4109.11 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 §4108.11, Table 3 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 §§3 and 7 of the Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Code §§6-922 and 926, 1995 Repl. Vol.), the Wastewater System Regulation Amendment Act of 1985, effective March 26, 1986 (D.C. Code §§6-951 *et seq.*, 1995 Repl. Vol.) 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 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 §§3 and 7 of the Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Code §§6-922 and 926, 1995 Repl. Vol.), or the Wastewater System Regulation Amendment Act of 1985, effective March 26, 1986 (D.C. Code §§6-951 *et seq.*, 1995 Repl. Vol.) or that inject in Class I deep wells regulated under the 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 §5002.6(b) may be disposed in a landfill or surface impoundment outside the District, only if the unit is in compliance with the requirements specified in §5000.12(h)(2) or its state equivalent;
- (d) The requirements of §§5002.6(a), (b), and (c) do not apply if:
 - (1) The wastes meet the applicable treatment standards specified in §5003;
 - (2) Persons have been granted an exemption from a prohibition pursuant to a petition under §5000.13, 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 §5003.11; and
 - (4) Persons have been granted an extension to the effective date of a prohibition pursuant to §5000.12, with respect to these wastes covered by the extension; and

- (e) To determine whether a hazardous waste identified in §5002.6 exceeds the applicable treatment standards specified in §5003, the initial generator shall 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 §5003 levels, the waste is prohibited from land disposal, and all requirements of Chapter 50 are applicable, except as otherwise specified.

5002.7 The following are waste-specific prohibitions for the land disposal of spent aluminum potliners, reactive, and carbamate wastes:

- (a) On July 8, 1996, the wastes specified in §4109.11 as EPA Hazardous Waste numbers K156-K159, and K161; and in §4109.12 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 §§4108.8 and 4108.9 as D003 that are managed in systems other than those whose discharge is regulated under §§3 and 7 of the Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Code §§6-922 and 926, 1995 Repl. Vol.), the Wastewater System Regulation Amendment Act of 1985, effective March 26, 1986 (D.C. code §§6-951 *et seq.*, 1995 Repl. Vol.) or that inject in Class I deep wells regulated under the 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 that have been the subject of an emergency response. (These D003 wastes are prohibited unless they meet the treatment standard of DEACT before land disposal (see §5003));
- (c) On October 8, 1997, the wastes specified in §4109.11 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 §§5002.7(a), (c), and (d) may be disposed in a landfill or surface impoundment outside the District, only if the unit is in compliance with the requirements specified in §5000.12(h)(2) or its state equivalent;
- (f) The requirements of §§5002.7(a), (b), (c), and (d) do not apply if:
 - (1) The wastes meet the applicable treatment standards specified in §5003;

- (2) Persons have been granted an exemption from a prohibition pursuant to a petition under §5000.13, 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 §5003.11;
 - (4) Persons have been granted an extension to the effective date of a prohibition pursuant to §5000.12, with respect to these wastes covered by the extension; and
- (g) To determine whether a hazardous waste identified in §5002.7 exceeds the applicable treatment standards specified in §5003, the initial generator shall 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 §5003 levels, the waste is prohibited from land disposal, and all requirements of this Chapter 50 are applicable, except as otherwise specified

5003 TREATMENT STANDARDS

5003.1 A prohibited waste identified in the table "Treatment Standards for Hazardous Wastes" as incorporated by reference at §5003.9 may be land disposed only if it meets the requirements found in the table. For each waste, the table identifies one of three (3) types of treatment standard requirements:

- (a) All hazardous constituents in the waste or in the treatment residue shall be at or below the values found in the table for that waste ("total waste standards");
- (b) The hazardous constituents in the extract of the waste or in the extract of the treatment residue shall be at or below the values found in the table ("waste extract standards");
or
- (c) The waste shall be treated using the technology specified in the table ("technology standard"), which are described in detail in §5003.10(b), Table 3-Technology Codes and Description of Technology-Based Standards.

5003.2 For wastewaters, compliance with concentration level standards is based on maximums for any one day, except for D004 through D011 wastes for which the previously promulgated treatment standards based on grab samples remain in effect. For all nonwastewaters, compliance with concentration level standards is based on grab sampling. For wastes covered by the waste extract standards, the test Method 1311, the Toxicity Characteristic Leaching Procedure found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, as incorporated by reference in §4017(o), shall be used to measure compliance. An exception is made for D004 and D008, for which either of two (2) test methods may be used: Method 1311, or Method 1310, the Extraction Procedure Toxicity Test. For wastes covered by a technology standard, the wastes may be land disposed after being treated using that specified technology or an equivalent treatment technology approved by the Administrator under the procedures set forth in §5003.10(c).

- 5003.3 When wastes with differing treatment standards for a constituent of concern are combined for purposes of treatment, the treatment residue shall meet the lowest treatment standard for the constituent of concern.
- 5003.4 Notwithstanding the prohibitions specified in §5003.1, treatment and disposal facilities may demonstrate (and certify pursuant to §5000.15(a)(6)) compliance with the treatment standards for organic constituents specified by a footnote in the table "Treatment Standards for Hazardous Wastes" in §5003, provided the following conditions are satisfied:
- (a) 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;
 - (b) The treatment or disposal facility has used the methods referenced in §5003.4(a) to treat the organic constituents; and
 - (c) The treatment or disposal facility may demonstrate compliance with organic constituents if good-faith analytical efforts achieve detection limits for the regulated organic constituents that do not exceed the treatment standards specified in §5003 by an order of magnitude.
- 5003.5 For characteristic wastes (D001--D043) that are subject to treatment standards in the following table "Treatment Standards for Hazardous Wastes," and are not managed in a wastewater treatment system that is regulated under §§3 and 7 of the Water Pollution Control Act of 1984, effective March 16, 1985 (D.C. Code §§6-922 and 6-926, 1995 Repl. Vol.), the Wastewater System Regulation Amendment Act of 1985, effective March 26, 1986 (D.C. Code §§6-951 *et seq.*, 1995 Repl. Vol.) that is CWA-equivalent, or that is injected into a Class I nonhazardous deep injection well, all underlying hazardous constituents (as defined in §5400.1) must meet Universal Treatment Standards, found in 40 CFR Part 268.48 Table Universal Treatment Standards, as incorporated by reference, prior to land disposal as defined in §5400.1.
- 5003.6 The treatment standards for F001-F005 nonwastewater constituents carbon disulfide, cyclohexanone, and/or methanol apply to wastes that 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 §4017(o). If the waste contains any of these three (3) constituents along with any of the other twenty-five (25) constituents found in F001-F005, then compliance with treatment standards for carbon disulfide, cyclohexanone, and/or methanol are not required.
- 5003.7 Between August 26, 1997, and August 26, 1998, the treatment standards for the wastes specified in §4109.11 as EPA Hazardous Waste numbers K156-K161; and in §4109.12 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 40 CFR Part 268.40 "Treatment Standards for Hazardous Wastes" as incorporated by reference

at §5003.9, or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST at §5003.10(b), Table 3, 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 a §5003.10(b), Table 3, for wastewaters.

- 5003.8 Prohibited D004-D011 mixed radioactive wastes and mixed radioactive listed wastes containing metal constituents, that were previously treated by stabilization to the treatment standards in effect at that time and then put into storage, do not have to be re-treated to meet treatment standards in §5003 prior to land disposal.
- 5003.9 The 40 CFR 268.40 Table "Treatment Standards for Hazardous Wastes" is incorporated by reference, except that land disposal is prohibited in the District.
- 5003.10 The following provisions address treatment standards expressed as specific technologies:
- (a) The following wastes in the table in 40 CFR 268.40 "Treatment Standards for Hazardous Wastes," as incorporated by reference at §5003.9, for which standards are expressed as a treatment method rather than a concentration level, shall be treated using the technology or technologies specified in the Table 3 entitled "Technology Codes and Description of Technology-based Standards" in §5003.10.
 - (b) [Reserved]

Table 3.-Technology Codes and Description of Technology-Based Standards

Technology code	Description of technology-based standards
Organic Constituents	
ADGAS:	Venting of compressed gases into an absorbing or reacting media (that is, solid or liquid)-venting can be accomplished through physical release utilizing valves/piping; physical penetration of the container; and/or penetration through detonation.
AMLGM:	Amalgamation of liquid, elemental mercury contaminated with radioactive materials utilizing inorganic reagents such as copper, zinc, nickel, gold, and sulfur that result in a nonliquid, semi-solid amalgam and thereby reducing potential emissions of elemental mercury vapors to the air.
BIODG:	Biodegradation of organics or non-metallic inorganics (that is, degradable inorganics that contain the elements of phosphorus, nitrogen, and sulfur) in units operated under either aerobic or anaerobic conditions such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (for example, Total Organic Carbon can often be used as an indicator parameter for the biodegradation of many organic constituents that cannot be directly analyzed in wastewater residues).
CARBN:	Carbon adsorption (granulated or powdered) of non-metallic inorganics, organo-metallics, and/or organic constituents, operated such that a surrogate compound or indicator parameter has not undergone breakthrough (for example, Total Organic Carbon can often be used as an indicator parameter for the adsorption of many organic constituents that cannot be directly analyzed in wastewater residues). Breakthrough occurs when the carbon has become saturated with the constituent (or indicator parameter) and substantial change in adsorption rate associated with that constituent occurs.
CHOXD:	Chemical or electrolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combinations of reagents: (1) Hypochlorite (for example, bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permangantes; and/or (9) other oxidizing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (for example, Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues). Chemical oxidation specifically includes what is commonly referred to as alkaline chlorination.
CHRED:	Chemical reduction utilizing the following reducing reagents (or waste reagents) or combinations of reagents: (1) Sulfur dioxide; (2) sodium, potassium, or alkali salts or sulfites, bisulfites, metabisulfites, and polyethylene glycols (for example, NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; and/or (5) other reducing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (for example, Total Organic Halogens can often be used as an indicator parameter for the reduction of many halogenated organic constituents that cannot be directly analyzed in wastewater residues). Chemical reduction is commonly used for the reduction of hexavalent chromium to the trivalent state.
CMBST:	High temperature organic destruction technologies, such as combustion in incinerators, boilers, or industrial furnaces operated in accordance with the applicable requirements of 40 CFR part 264, subpart O, or 40 CFR part 265, subpart O, or 40 CFR part 266, subpart H or their state equivalent, and in other units operated in accordance with applicable technical operating requirements; and certain non-combustive technologies, such as the Catalytic Extraction Process [treatment not allowed in District].
DEACT:	Deactivation to remove the hazardous characteristics of a waste due to its ignitability, corrosivity, and/or reactivity.
FSUBS:	Fuel substitution in units operated in accordance with applicable technical operating requirements.

Technology code	Description of technology-based standards
HLVIT:	Vitrification of high level mixed radioactive wastes in units in compliance with all applicable radioactive protection requirements under control of the Nuclear Regulatory Commission.
IMERC:	Incineration of wastes containing organics and mercury in units operated in accordance with the technical operating requirements of 40 CFR part 264 subpart 0 and part 265 subpart 0 or state equivalent. All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (for example, High or Low Mercury Subcategories). [Treatment not allowed in District].
INCIN:	Incineration in units operated in accordance with the technical operating requirements of 40 CFR part 264 subpart 0 and part 265 subpart 0 or state equivalent. [Treatment not allowed in District].
LLEXT:	Liquid-liquid extraction (often referred to as solvent extraction) of organics from liquid wastes into an immiscible solvent for which the hazardous constituents have a greater solvent affinity, resulting in an extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and a raffinate (extracted liquid waste) proportionately low in organics that must undergo further treatment as specified in the standard.
MACRO:	Macroencapsulation with surface coating materials such as polymeric organics (e.g. resins and plastics) or with a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media. Macroencapsulation specifically does not include any material that would be classified as a tank or container according to 40 CFR 260.10.
NEUTR:	Neutralization with the following reagents (or waste reagents) or combinations of reagents: (1) Acids; (2) bases; or (3) water (including wastewaters) resulting in a pH greater than 2 but less than 12.5 as measured in the aqueous residuals.
NLDBR:	No land disposal based on recycling.
POLYM:	Formation of complex high-molecular weight solids through polymerization of monomers in high-TOC D001 non-wastewaters which are chemical components in the manufacture of plastics.
PRECP:	Chemical precipitation of metals and other inorganics as insoluble precipitates of oxides, hydroxides, carbonates, sulfides; sulfates, chlorides, fluorides, or phosphates. The following reagents (or waste reagents) are typically used alone or in combination: (1) Lime (that is, containing oxides and/or hydroxides of calcium and/or magnesium; (2) caustic (that is, sodium and/or potassium hydroxides; (3) soda ash (that is, sodium carbonate); (4) sodium sulfide; (5) ferric sulfate or ferric chloride; (6) alum; or (7) sodium sulfate. Additional flocculating, coagulation or similar reagents/processes that enhance sludge dewatering characteristics are not precluded from use.
RBERY:	Thermal recovery of Beryllium.
RCGAS:	Recovery/reuse of compressed gases including techniques such as reprocessing of the gases for reuse/resale; filtering/adsorption of impurities; remixing for direct reuse or resale; and use of the gas as a fuel source.
RCORR:	Recovery of acids or bases utilizing one or more of the following recovery technologies: (1) Distillation (that is, thermal concentration); (2) ion exchange; (3) resin or solid adsorption; (4) reverse osmosis; and/or (5) incineration for the recovery of acid-Note: this does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.
RLEAD:	Thermal recovery of lead in secondary lead smelters.

Technology code	Description of technology-based standards
RMERC:	Retorting or roasting in a thermal processing unit capable of volatilizing mercury and subsequently condensing the volatilized mercury for recovery. The retorting or roasting unit (or facility) must be subject to one or more of the following: (a) a National Emissions Standard for Hazardous Air Pollutants (NESHAP) for mercury; (b) a Best Available Control Technology (BACT) or a Lowest Achievable Emission Rate (LAER) standard for mercury imposed pursuant to a Prevention of Significant Deterioration (PSD) permit; or (c) a state permit that establishes emission limitations (within meaning of section 302 of the Clean Air Act) for mercury. All wastewater and nonwastewater residues derived from this process must then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (for example, High or Low Mercury Subcategories).
RMETL:	Recovery of metals or inorganics utilizing one or more of the following direct physical/removal technologies: (1) Ion exchange; (2) resin or solid (that is, zeolites) adsorption; (3) reverse osmosis; (4) chelation/solvent extraction; (5) freeze crystallization; (6) ultrafiltration and/or (7) simple precipitation (that is, crystallization) - Note: This does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.
RORGS:	Recovery of organics utilizing one or more of the following technologies: (1) Distillation; (2) thin film evaporation; (3) steam stripping; (4) carbon adsorption; (5) critical fluid extraction; (6) liquid-liquid extraction; (7) precipitation/crystallization (including freeze crystallization); or (8) chemical phase separation techniques (that is, addition of acids, bases, demulsifiers, or similar chemicals); - Note: this does not preclude the use of other physical phase separation techniques such as a decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies.
RTHRM:	Thermal recovery of metals or inorganics from nonwastewaters in units identified as industrial furnaces according to subparagraphs (1), (6), (7), (11), and (12) under the definition of "industrial furnaces" at §5400.1.
RZINC:	Resmelting in high temperature metal recovery units for the purpose of recovery of zinc.
STABL:	Stabilization with the following reagents (or waste reagents) or combinations of reagents: (1) Portland cement; or (2) lime/pozzolans (for example, fly ash and cement kiln dust) - this does not preclude the addition of reagents (for example, iron salts, silicates, and clays) designed to enhance the set/cure time and/or compressive strength, or to overall reduce the leachability of the metal or inorganic.
SSTRP:	Steam stripping of organics from liquid wastes utilizing direct application of steam to the wastes operated such that liquid and vapor flow rates, as well as, temperature and pressure ranges have been optimized, monitored, and maintained. These operating parameters are dependent upon the design parameters of the unit such as, the number of separation stages and the internal column design. Thus, resulting in a condensed extract high in organics that must undergo either incineration, reuse as a fuel, or other recovery/reuse and an extracted wastewater that must undergo further treatment as specified in the standard.
WETOX:	Wet air oxidation performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (for example, Total Organic Carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues).
WTRRX:	Controlled reaction with water for highly reactive inorganic or organic chemicals with precautionary controls for protection of workers from potential violent reactions as well as precautionary controls for potential emissions of toxic/ignitable levels of gases released during the reaction.

Note 1: When a combination of these technologies (that is, a treatment train) is specified as a single treatment standard, the order of application is specified in the 40 CFR 268.40 Table as incorporated by reference at §5003.9 by indicating the five letter technology code that must be applied first, then the designation "fb." (an abbreviation for "followed by"), then the five letter technology code for the technology that must be applied next, and so on.

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

- (c) Any person may submit an application to the Administrator demonstrating that an alternative treatment method can achieve a measure of performance equivalent to that achieved by methods specified in §§5003.10(a), (d), and (e) for wastes or specified in Table 5 of §5003.12 for hazardous debris. The applicant shall submit information demonstrating that his or her treatment method is in compliance with federal and District requirements and is protective of human health and the environment. Based on that information and any other available information, the Administrator may approve the use of the alternative treatment method if he or she finds that the alternative treatment method provides a measure of performance equivalent to that achieved by methods specified in §§5003.10(a), (d), and (e) for wastes or in Table 5 of §5003.12 for hazardous debris. Any approval shall be stated in writing and may contain provisions and conditions the Administrator deems appropriate. The person to whom the approval is issued shall comply with all limitations contained in such a determination;
- (d) As an alternative to the otherwise applicable §5003 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 or their state equivalents [prohibited in the District];
 - (2) The lab pack does not contain any of the wastes listed in Appendix IV to 40 CFR part 268, as incorporated by reference at §5005.1(d);
 - (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 or their state equivalents [treatment prohibited in the District]; 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 §5003; and
- (e) Radioactive hazardous mixed wastes are subject to the treatment standards in §5003. Where treatment standards are specified for radioactive mixed wastes in the Table of Treatment Standards, those treatment standards shall 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 §5003.12.

5003.11 The procedures for petitions for variance from the treatment standard are as follows:

- (a) Based on a petition filed by a generator or treater of hazardous waste, the Administrator may approve a variance from an applicable treatment standard if:
- (1) It is not physically possible to treat the waste to the level specified in the treatment standard, or by the method specified as the treatment standard. To show that this is the case, the petitioner must demonstrate that because the physical or chemical

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properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method;

- (2) It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though treatment is technically possible. To show that this is the case, the petitioner shall either demonstrate that:
- (A) Treatment to the specified level or by the specified method is technically inappropriate (for example, resulting in combustion of large amounts of mildly contaminated environmental media); or
 - (B) For remediation waste only, treatment to the specified level or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation.
- (b) Each petition shall be submitted in accordance with the procedures in §§4001.1 through 4001.5;
- (c) Each petition shall include the following statement signed by the petitioner or an authorized representative:
- I certify under penalty of law that I have personally examined and am familiar with the information submitted in this petition and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that these are significant penalties for submitting false information, including the possibility of fine and imprisonment.
- (d) After receiving a petition for variance from a treatment standard, the Administrator may request any additional information or samples that he or she may require to evaluate the petition. Additional copies of the complete petition may be requested as needed to send to affected states and Regional Offices;
- (e) The Administrator shall give public notice in the Federal Register of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a variance from a treatment standard shall be published in the Federal Register;
- (f) A generator, treatment facility, or disposal facility that is managing a waste covered by a variance from the treatment standards shall comply with the waste analysis requirements for restricted wastes found under §§5000.14 through 5000.17;
- (g) During the petition review process, the applicant is required to comply with all restrictions on land disposal under Chapter 50 once the effective date for the waste has been reached;

- (h) Based on a petition filed by a generator or treater of hazardous waste, the Administrator or his or her delegated representative may approve a site-specific variance from an applicable treatment standard if:
- (1) It is not physically possible to treat the waste to the level specified in the treatment standard, or by the method specified as the treatment standard. To show that this is the case, the petitioner shall demonstrate that because the physical or chemical properties of the waste differ significantly from waste analyzed in developing the treatment standard, the waste cannot be treated to the specified level or by the specified method; or
 - (2) It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though treatment is technically possible. To show that this is the case, the petitioner shall either demonstrate that:
 - (A) Treatment to the specified level or by the specified method is technically inappropriate (for example, resulting in combustion of large amounts of mildly contaminated environmental media where the treatment standard is not based on combustion of such media); or
 - (B) For remediation waste only, treatment to the specified level or by the specified method is environmentally inappropriate because it would likely discourage aggressive remediation;
 - (3) For contaminated soil only, treatment to the level or by the method specified in the soil treatment standards would result in concentrations of hazardous constituents that are below (for example, lower than) the concentrations necessary to minimize short- and long-term threats to human health and the environment. Treatment variances approved under §5003.11(h) shall:
 - (A) At a minimum, impose alternative land disposal restriction treatment standards that, using a reasonable maximum exposure scenario:
 - (i) For carcinogens, achieve constituent concentrations that result in the total excess risk to an individual exposed over a lifetime generally falling within a range from 10^{-4} to 10^{-6} ; and
 - (ii) For constituents with non-carcinogenic effects, achieve constituent concentrations that an individual could be exposed to on a daily basis without appreciable risk of deleterious effect during a lifetime; and
 - (B) Not consider post-land-disposal controls;
 - (4) For contaminated soil only, treatment to the level or by the method specified in the soil treatment standards would result in concentrations of hazardous constituents that are below (for example, lower than) natural background concentrations at the site where the contaminated soil will land disposed; and

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- (5) Public notice and a reasonable opportunity for public comment shall be provided before granting or denying a petition;
- (i) Each application for a site-specific variance from a treatment standard shall include the information in §§4001.2(a) through 4001.2(d);
- (j) After receiving an application for a site-specific variance from a treatment standard, the Assistant Administrator, or his or her delegated representative, may request any additional information or samples that may be required to evaluate the application;
- (k) A generator, treatment facility, or disposal facility that is managing a waste covered by a site-specific variance from a treatment standard shall comply with the waste analysis requirements for restricted wastes found under §§5000.14 through 5000.17;
- (l) During the application review process, the applicant for a site-specific variance shall comply with all restrictions on land disposal under this chapter once the effective date for the waste has been reached;
- (m) For all variances, the petitioner shall also demonstrate that compliance with any given treatment variance is sufficient to minimize threats to human health and the environment posed by land disposal of the waste. In evaluating this demonstration, EPA may take into account whether a treatment variance should be approved if the subject waste is to be used in a manner constituting disposal pursuant to §§4502.1 through 4502.8; and
- (n) The following facilities are excluded from the treatment standards under §5003 and are subject to the following constituent concentrations:

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Table 4 -- Wastes Excluded from the Treatment Standards Under §5003.

Facility name ¹ and address	Waste code	See also	Regulated hazardous constituent	Wastewaters		Nonwastewaters	
				Concentration (mg/l)	Notes	Concentration (mg/kg)	Notes
Craftsman Plating and Tinning, Corp., Chicago, IL.	F006	Table CCWE in 40 CFR 268.40	Cyanides (Total)	1.2	(²)	1800	(⁴)
			Cyanides (Amenable)	.86	(² and ³)	30	(⁴)
			Cadmium	1.6		NA	
			Chromium	.32		NA	
			Lead	.040		NA	
			Nickel	.44		NA	
Northwestern Plating Works, Inc., Chicago, IL.	F006	Table CCWE in 40 CFR 268.40	Cyanides (Total)	1.2	(² and ³)	970	(⁴)
			Cyanides (Amenable)	.86	(²)	30	(⁴)
			Cadmium	1.6		NA	
			Chromium	.32		NA	
			Lead	.040		NA	
			Nickel	.44		NA	

(¹)-A facility may certify compliance with these treatment standards according to provisions in §§5000.14 through 5000.17.
 (²)-Cyanide Wastewater Standards for F006 are based on analysis of composite samples.
 (³)-These facilities must comply with 0.86 mg/l for amenable cyanides in the wastewater exiting the alkaline chlorination system. These facilities must also comply with §5000.14(d) for appropriate monitoring frequency consistent with the facilities' waste analysis plan.
 (⁴)-Cyanide nonwastewaters are analyzed using SW-846 Method 9010 or 9012, sample size 10 grams, distillation time, 1 hour and 15 minutes.

Note: NA means Not Applicable.

5003.12 Treatment standards for hazardous debris are regulated as follows:

- (a) Hazardous debris shall be treated before land disposal as follows unless EPA determines under §4100.17(b) that the debris is no longer contaminated with hazardous waste or the debris is treated to the waste-specific treatment standard provided in §5003 for the waste contaminating the debris:
 - (1) Hazardous debris shall be treated for each "contaminant subject to treatment" defined by §5003.12(b) using the technology or technologies identified in Table 5 of §5003.12;
 - (2) Hazardous debris that exhibits the characteristic of ignitability, corrosivity, or reactivity identified under §§4108.4 through 4108.9, respectively, shall be deactivated by treatment using one of the technologies identified in Table 5 of §5003.12;
 - (3) The treatment standards of Table 5 of §5003.12 shall 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 shall be the last treatment technology used;
 - (4) Debris that is contaminated with two (2) or more contaminants subject to treatment identified under §5003.12(b) shall be treated for each contaminant using one or more treatment technologies identified in Table 5 of §5003.12. If an immobilization technology is used in a treatment train, it shall be the last treatment technology used; and
 - (5) 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 §5003.12, whichever are more stringent; and
- (b) Hazardous debris shall be treated for each "contaminant subject to treatment." The contaminants subject to treatment shall be determined as follows:
 - (1) The contaminants subject to treatment for debris that exhibits the Toxicity Characteristic (TC) by §4108.11 are those EP constituents for which the debris exhibits the TC toxicity characteristic;
 - (2) 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 §5003; and
 - (3) Hazardous debris that is reactive because of cyanide shall be treated for cyanide.
- (c) Hazardous debris that has been treated using one of the specified extraction or destruction technologies in Table 5 of §5003.12 and that does not exhibit a characteristic of hazardous waste identified under §4108 after treatment is not a hazardous waste and need not be managed in a HWMA or a RCRA Subtitle C facility. Hazardous debris contaminated with a listed waste that is treated by an immobilization technology

specified in Table 5 of §5003.12 is a hazardous waste and shall be managed in a RCRA Subtitle C facility; and

(d) Requirements for treatment residuals are as follows:

- (1) Except as provided by §§5003.12(d)(2) and (d)(4) residue from the treatment of hazardous waste debris:
 - (A) Shall be separated from the treated debris using simple physical or mechanical means; and
 - (B) Is subject to the waste-specific treatment standards provided by §5003 for the waste contaminating the debris.
- (2) 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 §5003.12(b), shall be deactivated prior to land disposal and is not subject to the waste-specific treatment standards of §5003;
- (3) Residue from the treatment of debris that is reactive because of cyanide shall meet the treatment standards for D003 in 40 CFR 268.40 Table "Treatment Standards for Hazardous Wastes", as incorporated by reference at §5003.9;
- (4) Ignitable nonwastewater residue containing equal to or greater than ten (10%) percent total organic carbon is subject to the technology specified in the treatment standard for D001: Ignitable Liquids; and
- (5) Layers of debris removed by spalling are hazardous debris that remain subject to the treatment standards of §5003.12.

Table 5.-Alternative Treatment Standards For Hazardous Debris¹

Technology description	Performance or design and operating standard	Contaminant restrictions ²
A. Extraction Technologies:		
1. Physical Extraction		
a. Abrasive Blasting: Removal of contaminated debris surface layers using water or air pressure to propel a solid media (for example, steel shot, aluminum oxide grit, plastic beads).	Glass, Metal, Plastic, Rubber: Treatment to a clean debris surface. ³ Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Removal of at least 0.6 cm of the surface layer; treatment to a clean debris surface. ³	All Debris: None.
b. Scarification, Grinding, and Planing: Process utilizing striking piston heads, saws, or rotating grinding wheels such that contaminated debris surface layers are removed.	Same as above.	Same as above.

<p>c. Spalling: Drilling or chipping holes at appropriate locations and depth in the contaminated debris surface and applying a tool which exerts a force on the sides of those holes such that the surface layer is removed. The surface layer removed remains hazardous debris subject to the debris treatment standards.</p>	<p>Same as above.</p>	<p>Same as above.</p>
<p>d. Vibratory Finishing: Process utilizing scrubbing media, flushing fluid, and oscillating energy such that hazardous contaminants or contaminated debris surface layers are removed.</p>	<p>Same as above.</p>	<p>Same as above.</p>
<p>e. High Pressure Steam and Water Sprays: Application of water or steam sprays of sufficient temperature, pressure, residence time, agitation, surfactants, and detergents to remove hazardous contaminants from debris surfaces or to remove contaminated debris surface layers.</p>	<p>Same as above.</p>	<p>Same as above.</p>
<p>2. Chemical Extraction</p>		
<p>a. Water Washing and Spraying: Application of water sprays or water baths of sufficient temperature, pressure, residence time, agitation, surfactants, acids, bases, and detergents to remove hazardous contaminants from debris surfaces and surface pores or to remove contaminated debris surface layers.</p>	<p>All Debris: Treatment to a clean debris surface³; Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 1.2 cm (1/2 inch) in one dimension (for example, thickness limit,⁵ except that this thickness limit may be waived under an "Equivalent Technology" approval under §5003.10(c);⁸ debris surfaces must be in contact with water solution for at least fifteen (15) minutes</p>	<p>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Contaminant must be soluble to at least 5% by weight in water solution or 5% by weight in emulsion; if debris is contaminated with a dioxin-listed waste,⁶ an "Equivalent Technology" approval under §5003.10(c) must be obtained.⁸</p>
<p>b. Liquid Phase Solvent Extraction: Removal of hazardous contaminants from debris surfaces and surface pores by applying a nonaqueous liquid or liquid solution which causes the hazardous contaminants to enter the liquid phase and be flushed away from the debris along with the liquid or liquid solution while using appropriate agitation, temperature, and residence time.⁴</p>	<p>Same as above.</p>	<p>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Same as above, except that contaminant must be soluble to at least 5% by weight in the solvent.</p>
<p>c. Vapor Phase Solvent Extraction: Application of an organic vapor using sufficient agitation, residence time, and temperature to cause hazardous contaminants on contaminated debris surfaces and surface pores to enter the vapor phase and be flushed away with the organic vapor.⁴</p>	<p>Same as above, except that brick, cloth, concrete, paper, pavement, rock and wood surfaces must be in contact with the organic vapor for at least sixty (60) minutes.</p>	<p>Same as above.</p>

3. Thermal Extraction

a. High Temperature Metals Recovery: Application of sufficient heat, residence time, mixing, fluxing agents, or carbon in a smelting, melting, or refining furnace to separate metals from debris.

For refining furnaces, treated debris must be separated from treatment residuals using simple physical or mechanical means,⁵ and, prior to further treatment, such residuals must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.

Debris contaminated with a dioxin-listed waste:⁵ Obtain an "Equivalent Technology" approval under §5003.10(c).⁶

b. Thermal Desorption: Heating in an enclosed chamber under either oxidizing or nonoxidizing atmospheres at sufficient temperature and residence time to vaporize hazardous contaminants from contaminated surfaces and surface pores and to remove the contaminants from the heating chamber in a gaseous exhaust gas.⁷

All Debris: Obtain an "Equivalent Technology" approval under §5000.10(c);⁸ treated debris must be separated from treatment residuals using simple physical or mechanical means,⁹ and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.

All Debris: Metals other than mercury.

Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 10 cm (4 inches) in one dimension (for example, thickness limit),⁵ except that this thickness limit may be waived under the "Equivalent Technology" approval.

B. Destruction Technologies:

1. Biological Destruction (Biodegradation): Removal of hazardous contaminants from debris surfaces and surface pores in an aqueous solution and biodegradation of organic or nonmetallic inorganic compounds (for example, inorganics that contain phosphorus, nitrogen, or sulfur) in units operated under either aerobic or anaerobic conditions.

All Debris: Obtain an "Equivalent Technology" approval under §5000.10(c);⁸ treated debris must be separated from treatment residuals using simple physical or mechanical means,⁹ and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.

All Debris: Metal contaminants.

Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 1.2 cm (1/2 inch) in one dimension (for example, thickness limit),⁵ except that this thickness limit may be waived under the "Equivalent Technology" approval.

2. Chemical Destruction

US EPA ARCHIVE DOCUMENT

a. Chemical Oxidation: Chemical or electrolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combination of reagents-(1) hypochlorite (for example, bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permanganates; or (9) other oxidizing reagents of equivalent destruction efficiency.⁴ Chemical oxidation specifically includes what is referred to as alkaline chlorination.

b. Chemical Reduction: Chemical reaction utilizing the following reducing reagents (or waste reagents) or combination of reagents: (1) sulfur dioxide; (2) sodium, potassium, or alkali salts of sulfites, bisulfites, and metabisulfites, and polyethylene glycols (for example, NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; or (5) other reducing reagents of equivalent efficiency.⁴

3. Thermal Destruction: Treatment in an incinerator (outside the District) operating in accordance with Subpart O of 40 CFR Parts 264 or 265 or their State equivalent; a boiler or industrial furnace (outside the District) operating in accordance with Subpart H of 40 CFR Part 266 or their State equivalent, or other thermal treatment unit operated in accordance with §4425, or §4401, but excluding for purposes of these debris treatment standards Thermal Desorption units.

C. Immobilization Technologies:

1. Macroencapsulation: Application of surface coating materials such as polymeric organics (for example, resins and plastics) or use of a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media.

All Debris: Obtain an "Equivalent Technology" approval under §5000.10(c);⁸ treated debris must be separated from treatment residuals using simple physical or mechanical means,⁹ and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.

Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris must be no more than 1.2 cm (1/2 inch) in one dimension (for example, thickness limit),⁵ except that this thickness limit may be waived under the "Equivalent Technology" approval

Same as above.

Treated debris must be separated from treatment residuals using simple physical or mechanical means,⁹ and, prior to further treatment, such residue must meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.

Encapsulating material must completely encapsulate debris and be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other waste, microbes).

All Debris: Metal contaminants.

Same as above.

Brick, Concrete, Glass, Metal, Pavement, Rock, Metal: Metals other than mercury, except that there are no metal restrictions for vitrification. Debris contaminated with a dioxin-listed waste.⁶ Obtain an "Equivalent Technology" approval under §5003.10(c),⁸ except that this requirement does not apply to vitrification.

None.

<p>2. Microencapsulation: Stabilization of the debris with the following reagents (or waste reagents) such that the leachability of the hazardous contaminants is reduced: (1) Portland cement; or (2) lime/pozzolans (for example, fly ash and cement kiln dust). Reagents (for example, iron salts, silicates, and clays) may be added to enhance the set/cure time or compressive strength, or to reduce the leachability of the hazardous constituents.⁵</p>	<p>Leachability of the hazardous contaminants must be reduced.</p>	<p>None.</p>
<p>3. Sealing: Application of an appropriate material which adheres tightly to the debris surface to avoid exposure of the surface to potential leaching media. When necessary to effectively seal the surface, sealing entails pretreatment of the debris surface to remove foreign matter and to clean and roughen the surface. Sealing materials include epoxy, silicone, and urethane compounds, but paint may not be used as a sealant.</p>	<p>Sealing must avoid exposure of the debris surface to potential leaching media and sealant must be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other waste, microbes).</p>	<p>None.</p>

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

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

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

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

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

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

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

⁸The demonstration "Equivalent Technology" under §5003.10(c) must document that the technology treats contaminants subject to treatment to a level equivalent to that required by the performance and design and operating standards for other technologies in this table such that residual levels of hazardous contaminants will not pose a hazard to human health and the environment absent management controls.

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

5003.13 The 40 CFR 268.48 Table UTS is incorporated by reference. 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 §5400.1, these treatment standards may not be exceeded. Compliance with these treatment standards is measured by an analysis of grab samples, unless otherwise noted in Table UTS.

5003.14 The following are alternative LDR treatment standards for contaminated soil:

- (a) 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, as incorporated by reference at §5005.1(g). To determine the date any given listed hazardous waste contaminated any given volume of soil, use the last date any given listed hazardous waste was placed into any given land disposal unit or, in the case of an accidental spill, the date of the spill.

- (b) Prior to land disposal, contaminated soil identified by §5003.14(a) as needing to comply with LDRs shall be treated according to the applicable treatment standards specified in

§5003.14(c) or according to the Universal Treatment Standards specified in 40 CFR 268.48, as incorporated by reference at §5003.13, applicable to the contaminating listed hazardous waste or the applicable characteristic of hazardous waste if the soil is characteristic. The treatment standards specified in §5003.14(c) and the Universal Treatment Standards may be modified through a treatment variance approved in accordance with §5003.11;

- (c) Prior to land disposal, contaminated soil identified by §5003.14(a) as needing to comply with LDRs shall be treated according to all the standards specified in this paragraph or according to the Universal Treatment Standards specified in 40 CFR 268.48, as incorporated by reference at §5003.13.
 - (1) Prior to land disposal, all constituents subject to treatment shall be treated as follows:
 - (A) For non-metals, treatment shall achieve ninety (90%) percent reduction in total constituent concentrations, except as provided by §5003.14(c)(1)(C);
 - (B) For metals, treatment shall achieve ninety (90%) percent reduction in constituent concentrations as measured in leachate from the treated media (tested according to the TCLP) or ninety (90%) percent reduction in total constituent concentrations (when a metal removal treatment technology is used), except as provided by §5003.14(c)(1)(C);
 - (C) When treatment of any constituent subject to treatment to a ninety (90%) percent reduction standard would result in a concentration less than ten (10) times the Universal Treatment Standard for that constituent, treatment to achieve constituent concentrations less than ten (10) times the universal treatment standard is not required. Universal Treatment Standards are identified in 40 CFR 268.48 Table UTS, as incorporated by reference at §5003.13; and
 - (2) In addition to the treatment required by §5003.14(c)(1), prior to land disposal, soils that exhibit the characteristic of ignitability, corrosivity, or reactivity shall be treated to eliminate these characteristics;
 - (3) In addition to the treatment requirements of §§5003.14(c)(1) and (2), prior to land disposal, the following treatment is required for soils that contain nonanalyzable constituents:
 - (A) For soil that also contains analyzable constituents, treatment of those analyzable constituents to the levels specified in §§5003.14(c)(1) and (2); or,
 - (B) For soil that contains only nonanalyzable constituents, treatment by the method specified in §5003.10 for the waste contained in the soil.
- (d) When applying the soil treatment standards in §5003.14(c), constituents subject to treatment are any constituents listed in 40 CFR 268.48, Table UTS--Universal Treatment Standards, as incorporated by reference at §5003.13, that are reasonably expected to be present in any given volume of contaminated soil, except fluoride,

selenium, sulfides, vanadium and zinc, and are present at concentrations greater than ten times the universal treatment standard; and

- (e) Treatment residuals from treating contaminated soil identified by §5003.14(a) as needing to comply with LDRs shall be managed as follows:
 - (1) Soil residuals are subject to the treatment standards of §5003.14;
 - (2) Non-soil residuals are subject to:
 - (A) For soils contaminated by listed hazardous waste, the HWMA 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.

5004 PROHIBITIONS ON STORAGE

5004.1 Except as provided in §5004, the storage of hazardous wastes restricted from land disposal under §5002 or RCRA §3004 is prohibited, unless the following conditions are met:

- (a) A generator stores the wastes in tanks, containers, or containment buildings on-site solely for the purpose of the accumulation of quantities of hazardous waste necessary to facilitate proper recovery, treatment, or disposal and the generator complies with the requirements in §§4202.6 through 4202.8 and Chapter 44;
- (b) An owner/operator of a hazardous waste treatment, storage, or disposal facility stores the wastes in tanks, containers, or containment buildings solely for the purpose of the accumulation of quantities of hazardous waste necessary to facilitate proper recovery, treatment, or disposal and:
 - (1) Each container is clearly marked to identify its contents and the date each period of accumulation begins;
 - (2) 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 the 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 shall comply with the operating record requirements specified in §4411.10 or 40 CFR 265.73 as restricted by §4401.2; and
- (c) A transporter stores manifested shipments of these wastes at a transfer facility for ten (10) days or less.

5004.2 An owner/operator of a treatment, storage or disposal facility may store these wastes for up to one (1) year unless the Agency can demonstrate that storage was not solely for the purpose of accumulation of quantities of hazardous waste necessary to facilitate proper recovery, treatment, or disposal.

- 5004.3 A owner/operator of a treatment, storage or disposal facility may store these wastes beyond one year; however, the owner/operator bears the burden of proving that storage was solely for the purpose of accumulation of quantities of hazardous waste necessary to facilitate proper recovery, treatment, or disposal.
- 5004.4 If a generator's waste is exempt from a prohibition on the type of land disposal utilized for the waste (for example, because of an approved case-by-case extension under §5000.12, an approved §5000.13 petition, or a national capacity variance under §5002), the prohibition in §5004.1 does not apply during the period of the exemption.
- 5004.5 The prohibition in §5004.1 does not apply to hazardous wastes that meet the treatment standards specified under §5003.1 through 5003.9 and 5003.10 or the treatment standards specified under the variance in §5003.11.
- 5004.6 Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to fifty (50) ppm shall be stored at a facility that meets the requirements of 40 CFR 761.65(b) and shall be removed from storage and treated or disposed as required by this chapter within one (1) year of the date when the wastes are first placed into storage.

5005 INCORPORATED BY REFERENCE

- 5005.1 When used in Chapters 40 through 54, the following Appendices from Title 40 of the Code of Federal Regulations are incorporated by reference:
- (a) Appendix I of 40 CFR Part 268 - "Toxicity Characteristic Leaching Procedure (TCLP)";
 - (b) Appendix II of 40 CFR Part 268 - "Treatment Standards (As Concentrations in the Treatment Residual Extract)";
 - (c) Appendix III of 40 CFR Part 268 - List of Halogenated Organic Compounds Regulated Under §268.32;
 - (d) Appendix IV of 40 CFR Part 268 - "Organometallic Lab Packs";
 - (e) Appendix V of 40 CFR Part 268 - "Organic Lab Packs";
 - (f) Appendix VI of 40 CFR Part 268 - "Recommended Technologies to Achieve Deactivation of Characteristics in §268.42";
 - (g) Appendix VII of 40 CFR Part 268 - "Effective Dates of Surface Disposed Wastes Regulated in the LDRs";
 - (h) Appendix VIII of 40 CFR Part 268 - "National Capacity LDR Variances for UIC Wastes--Comprehensive List";
 - (i) Appendix IX of 40 CFR Part 268 - "Extraction Procedure (EP) Toxicity Test Method and Structural Integrity Test (Method 1310)"; and

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- (j) Appendix XI of 40 CFR Part 268 - "Metal Bearing Wastes Prohibited from Dilution in a Combustion Unit According to 40 CFR 268.3(c)."

CHAPTER 54 DEFINITIONS

5400.1 When used in Chapters 40 through 53, the following terms shall have the meanings given below:

"Above ground tank" - a device meeting the definition of "tank" in these regulations and that is situated in such a way that the entire surface area of the tank is completely above the plane of the adjacent surrounding surface and the entire surface area of the tank (including the tank bottom) is able to be visually inspected. For the purposes of the used oil requirements of Chapter 49, "Above ground tank" means a tank used to store or process used oil that is not an underground storage tank as defined in 20 DCMR Chapters 55-70.

"Accidental occurrence" - an accident, including continuous or repeated exposure to conditions, which results in bodily injury or property damage neither expected nor intended from the standpoint of the insured.

"Accumulated speculatively" - Material that is accumulated before being recycled unless the person accumulating it can show that the material is potentially recyclable and has a feasible means of being recycled; and that - during the calendar year (commencing on January 1) - the amount of material that is recycled, or transferred to a different site for recycling, equals at least seventy-five percent (75%) by weight or volume of the amount of that material accumulated at the beginning of the period. In calculating the percentage of turnover, the seventy-five percent (75%) requirement applies to each material of the same type (for example, slags from a single smelting process) that is recycled in the same way (for example, from which the same material is recovered or that is used in the same way). Materials accumulating in units that would be exempt from regulation under §4101.3 are not to be included in making the calculation. Materials that are already defined as solid wastes also are not to be included in making the calculation. Materials are no longer in this category once they are removed from accumulation for recycling, however.

"Act" - The District of Columbia Hazardous Waste Management Act of 1977, D.C. Law 2-64 (HWMA) as amended.

"Active life" of a facility - the period from the initial receipt of hazardous waste at the facility until the Director receives certification of final closure.

"Active portion" - that portion of a facility where treatment, storage, or disposal operations are being or have been conducted after the effective date of Chapter 41 and which is not a closed portion. (See also "closed portion" and "inactive portion".)

"Active range" - a military range that is currently in service and is being regularly used for range activities.

"Administrator" - the Administrator of the United States Environmental Protection Agency, or an authorized representative/designee.

"Air stripping operation" - a desorption operation employed to transfer one or more volatile components from a liquid mixture into a gas (air) either with or without the application of heat to the liquid. Packed towers, spray towers, and bubble-cap, sieve, or valve-type plate towers are among the process configurations used for contacting the air and a liquid.

"Amount of liability coverage" - the annual aggregate amounts for which coverage is required under §§4414.20 through 4414.30.

"Ancillary equipment" - any device including, but not limited to, devices such as piping, fittings, flanges, valves, and pumps, that is used to distribute, meter, or control the flow of hazardous waste from its point of generation to a storage or treatment tank(s), between hazardous waste storage and treatment tanks to a point of disposal onsite, or to a point of shipment for disposal off-site.

"Application" - the standard Department form for applying for a permit, including any additions, revisions or modifications to the forms; or forms approved by the Department for use in the District, including any approved modifications or revisions. Application also includes the information required by the Director under §§4603 through 4612 (contents of part B of the TSD facility permit application).

"Aquifer" - a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs.

"Assets" - all existing and all probable future economic benefits obtained or controlled by a particular entity.

"Authorized representative" - the person responsible for the overall operation of a facility or an operational unit (that is, part of a facility), for example, the plant manager, superintendent or person of equivalent responsibility.

"Average volatile organic concentration" or "average VO concentration" - the mass-weighted average volatile organic concentration of a hazardous waste as determined in accordance with the requirements of 40 CFR 265.1084 subject to the restrictions of §4401.2(q).

"Battery" - a device consisting of one or more electrically connected electrochemical cells that is designed to receive, store, and deliver electric energy. An electrochemical cell is a system consisting of an anode, cathode, and an electrolyte, plus the connections (electrical and mechanical) that may be needed to allow the cell to deliver or receive electrical energy. The term battery also includes an intact, unbroken battery from which the electrolyte has been removed.

"Bodily injury" - has the meaning given by applicable District law. However, bodily injury under this chapter does not include those liabilities that, consistent with standard insurance industry practice, are excluded from coverage in liability policies.

"Boiler" - an enclosed device using controlled flame combustion and having the following characteristics:

- (a) The unit must have physical provisions for recovering and exporting thermal energy in the form of steam, heated fluids, or heated gases; and

- (b) The unit's combustion chamber and primary energy recovery sections(s) must be of integral design. To be of integral design, the combustion chamber and the primary energy recovery section(s) (such as waterwalls and superheaters) must be physically formed into one manufactured or assembled unit. A unit in which the combustion chamber and the primary energy recovery section(s) are joined only by ducts or connections carrying flue gas is not integrally designed; however, secondary energy recovery equipment (such as economizers or air preheaters) need not be physically formed into the same unit as the combustion chamber and the primary energy recovery section. The following units are not precluded from being boilers solely because they are not of integral design: process heaters (units that transfer energy directly to a process stream), and fluidized bed combustion units; and
- (c) While in operation, the unit must maintain a thermal energy recovery efficiency of at least sixty percent (60%), calculated in terms of the recovered energy compared with the thermal value of the fuel; and
- (d) The unit must export and utilize at least seventy-five percent (75%) of the recovered energy, calculated on an annual basis. In this calculation, no credit shall be given for recovered heat used internally in the same unit. (Examples of internal use are the preheating of fuel or combustion air, and the driving of induced or forced draft fans or feedwater pumps); or
- (e) The unit is one that the Regional Administrator of the U.S. Environmental Protection Agency has determined, on a case-by-case basis, to be a boiler, after considering the standards in §4001.17.

"Bottoms receiver" - a container or tank used to receive and collect the heavier bottoms fractions of the distillation feed stream that remain in the liquid phase.

A "by-product" is a material that is not one of the primary products of a production process and is not solely or separately produced by the production process. Examples are process residues such as slags or distillation column bottoms. The term does not include a co-product that is produced for the general public's use and is ordinarily used in the form it is produced by the process.

"Carbon regeneration unit" - any enclosed thermal treatment device used to regenerate spent activated carbon.

"Certification" - a statement of professional opinion based upon knowledge and belief.

"Chemical agents and munitions" are defined as in 50 U.S.C. §1521(j)(1).

"Closed portion" - that portion of a facility which an owner or operator has closed in accordance with the approved facility closure plan and all applicable closure requirements. (See also "active portion" and "inactive portion".)

"Closed-vent system" - a system that is not open to the atmosphere and that is composed of piping, connections, and, if necessary, flow-inducing devices that transport gas or vapor from a piece or pieces of equipment to a control device.

"Closure" - the act of securing a Hazardous Waste Management facility pursuant to the requirements of Chapter 44.

"Closure plan" - the plan for closure prepared in accordance with the requirements of §§4413.3 through 4413.10.

"Closure device" - a cap, hatch, lid, plug, seal, valve, or other type of fitting that blocks an opening in a cover such that when the device is secured in the closed position it prevents or reduces air pollutant emissions to the atmosphere. Closure devices include devices that are detachable from the cover (for example, a sampling port cap), manually operated (for example, a hinged access lid or hatch), or automatically operated (for example, a spring-loaded pressure relief valve).

"Competent authorities" - the regulatory authorities of concerned countries having jurisdiction over transfrontier movements of wastes destined for recovery operations.

"Component" - either the tank or ancillary equipment of a tank system. For the purposes of Chapter 46, "Component" means any constituent part of a unit or any group of constituent parts of a unit that are assembled to perform a specific function (for example, a pump seal, pump, kiln liner, or kiln thermocouple).

"Concerned countries" - the exporting and importing OECD member countries and any OECD member countries of transit.

"Condenser" - a heat-transfer device that reduces a thermodynamic fluid from its vapor phase to its liquid phase.

"Confined aquifer" - an aquifer bounded above and below by impermeable beds or by beds of distinctly lower permeability than that of the aquifer itself; an aquifer containing confined ground water.

"Connector" - flanged, screwed, welded, or other joined fittings used to connect two pipelines or a pipeline and a piece of equipment. For the purposes of reporting and recordkeeping, "Connector" means flanged fittings that are not covered by insulation or other materials that prevent location of the fittings.

"Consignee" - the ultimate treatment, storage or disposal facility in a receiving country to which the hazardous waste will be sent for the purposes of §4204. For the purposes of §4207, "Consignee" means the person to whom possession or other form of legal control of the waste is assigned at the time the waste is received in the importing country.

"Container" - any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled. For the purposes of §4507.1, "Container" means any portable device in which hazardous waste is transported, stored, treated, or otherwise handled, and includes transport vehicles that are containers themselves (for example, tank trucks, tanker-trailers, and rail tank cars), and containers placed on or in a transport vehicle.

"Containment building" - a hazardous waste management unit that is used to store or treat hazardous waste under the provisions of §§4484 through 4486 of this title or 40 CFR part 265, subpart DD, as restricted by §4401.2.

"Contingency plan" - a document setting out an organized, planned, and coordinated course of action to be followed in case of a fire, explosion, or release of hazardous waste or hazardous waste constituents that could threaten human health or the environment.

"Continuous recorder" - a data-recording device recording an instantaneous data value at least once every fifteen (15) minutes.

"Continuous seal" - a seal that forms a continuous closure that completely covers the space between the edge of the floating roof and the wall of a tank. A continuous seal may be a vapor-mounted seal, liquid-mounted seal, or metallic shoe seal. A continuous seal may be constructed of fastened segments so as to form a continuous seal.

"Control device" - an enclosed combustion device, vapor recovery system, or flare. Any device the primary function of which is the recovery or capture of solvents or other organics for use, reuse, or sale (for example, a primary condenser on a solvent recovery unit) is not a control device.

"Control device shutdown" - the cessation of operation of a control device for any purpose.

"Corrective action management unit" or "CAMU" - an area within a facility that is designated by the Director under §4421, for the purpose of implementing corrective action requirements under §§4412.57 through 4412.59 and RCRA §3008(h) or §§11 and 12 of HWMA (D.C. Code §§6-710 and 6-711). A CAMU shall only be used for the management of remediation wastes pursuant to implementing the corrective action requirements at the facility.

"Corrosion expert" - a person who, by reason of his knowledge of the physical sciences and the principles of engineering and mathematics, acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. This person must be certified as being qualified by the National Association of Corrosion Engineers (NACE) or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control on buried or submerged metal piping systems and metal tanks.

"Country of transit" - any designated OECD country in §§4204.11(b)&(c) other than the exporting or importing country across which a transfrontier movement of wastes is planned or takes place.

"Cover" - a device that provides a continuous barrier over the hazardous waste managed in a unit to prevent or reduce air pollutant emissions to the atmosphere. A cover may have openings (such as access hatches, sampling ports, gauge wells) that are necessary for operation, inspection, maintenance, and repair of the unit on which the cover is used. A cover may be a separate piece of equipment that can be detached and removed from the unit or a cover may be formed by structural features permanently integrated into the design of the unit.

"Current assets" - cash or other assets or resources commonly identified as those that are reasonably expected to be realized in cash or sold or consumed during the normal operating cycle of the business.

"Current closure cost estimate" - the most recent of the estimates prepared in accordance with §§4414.3 through 4414.6, §4414.7 and §4414.8.

"Current post-closure cost estimate" - the most recent of the estimates prepared in accordance with §§4414.11, 4414.12, and 4414.13.

"Current liabilities" - obligations whose liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets or the creation of other current liabilities.

"CWA" - the Clean Water Act (formerly referred to as the Federal Water Pollution Control Act or Federal Water Pollution Control Act amendments of 1972) Pub. L. 92-500, as amended by Pub. L. 92-217 and Pub. L. 95-576; 33 U.S.C. 1251 *et seq.*

"Debris" - solid material exceeding a sixty (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 §5003, 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 seventy-five percent (75%) of their original volume. A mixture of debris that has not been treated to the standards provided by §5003.12 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

"Department" - District of Columbia Department of Health.

"Designated facility" - a hazardous waste treatment, storage, or disposal facility that (1) has received a permit (or interim status) in accordance with the requirements of Chapters 46 and 47 of this title, (2) has received a permit (or interim status) from the District or a State authorized in accordance with 40 CFR 271, or (3) is regulated under §4103.6 or §4505, and (4) that has been designated on the manifest by the generator pursuant to §4201. If a waste is destined to a facility in an authorized State that has not yet obtained authorization to regulate that particular waste as hazardous, then the designated facility must be a facility allowed by the receiving State to accept the waste.

"Destination facility" - a facility that treats, disposes of, or recycles a particular category of universal waste, except those management activities described in §§4801.7 and 4801.9. A facility at which a particular category of universal waste is only accumulated, is not a destination facility for purposes of managing that category of universal waste.

"Dike" - an embankment or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids, or other materials.

"Director" - Director of the Department of Health or his or her designee.

"Discarded" - abandoned (and not used, re-used, reclaimed or recycled) by being: (1) disposed of; (2) burned or incinerated, except where the material is being burned as a fuel for the purpose of recovering usable energy; or (3) physically, chemically, or biologically treated (other than burned or incinerated) instead of or before being disposed of.

"Discharge" or "hazardous waste discharge" - the accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of hazardous waste into or on any land or water.

"Displacement" - the relative movement of any two sides of a fault measured in any direction.

"Disposal" - the discharge, deposit, injection, dumping, spilling, leaking, or placing of any hazardous waste into or on any land or water so that the hazardous waste or any constituent thereof may enter the environment, be emitted into the air, or discharged into any waters, including ground waters.

"Disposal facility" - a facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which waste will remain after closure. The term disposal facility does not include a corrective action management unit into which remediation wastes are placed.

"Disposed of" - discharged, deposited, injected, dumped, spilled, leaked or placed into or on any land or water so that the material or any constituent thereof may enter the environment or be emitted into the air or discharged into ground or surface waters.

"Distillate receiver" - a container or tank used to receive and collect liquid material (condensed) from the overhead condenser of a distillation unit and from which the condensed liquid is pumped to larger storage tanks or other process units.

"Distillation operation" - an operation, either batch or continuous, separating one (1) or more feed stream(s) into two (2) or more exit streams, each exit stream having component concentrations different from those in the feed stream(s). The separation is achieved by the redistribution of the components between the liquid and vapor phase as they approach equilibrium within the distillation unit.

"District" or "D.C." - District of Columbia.

"District Agency" - any department, agency or other instrumentality of the District Government.

"District of Columbia/EPA Agreement" - an agreement between the Regional Administrator and the District of Columbia that coordinates EPA and District of Columbia activities, responsibilities and programs.

"District only wastes" - wastes that are regulated as hazardous wastes under the District of Columbia Hazardous Waste Management Regulations, but are not considered hazardous wastes under §§4100.12 through 4100.17.

"Domestic sewage" - untreated sanitary wastes that pass through a sewer system.

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

"Double block and bleed system" - two (2) block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

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"Draft permit" - a document prepared under §4702.2 indicating the Director's tentative decision to issue or deny, modify, revoke and reissue, terminate, or reissue a permit. A notice of intent to terminate a permit, and a notice of intent to deny a permit, as discussed in §4702.1, are types of draft permits. A denial of a request for modification, revocation and reissuance, or termination, as discussed in §4702.1 is not a "draft permit." A proposed permit is not a draft permit.

"Drip pad" - an engineered structure consisting of a curbed, free-draining base, constructed of non-earthen materials and designed to convey preservative kick-back or drippage from treated wood, precipitation, and surface water run-on to an associated collection system at wood preserving plants.

"Elementary neutralization unit" - a device that:

- (a) Is used for neutralizing wastes that are hazardous only because they exhibit the corrosivity characteristic defined in §§4108.6 and 4108.7, or they are listed in §§4109 and 4110 only for this reason; and
- (b) Meets the definition of tank, tank system, container, transport vehicle, or vessel in §5400.1.

"Emergency permit" - a TSD facility permit issued in accordance with §§4619.2 and 4619.3.

"Enclosure" - a structure that surrounds a tank or container, captures organic vapors emitted from the tank or container, and vents the captured vapors through a closed-vent system to a control device.

"Environmental Protection Agency (EPA)" - the United States Environmental Protection Agency.

"EPA Acknowledgment of Consent" - the cable sent to EPA from the U.S. Embassy in a receiving country that acknowledges the written consent of the receiving country to accept the hazardous waste and describes the terms and conditions of the receiving country's consent to the shipment.

"EPA hazardous waste number" - the number assigned by EPA to each hazardous waste listed in §§4109 and 4110 and to each characteristic identified in §4108.

"EPA identification number" - the number assigned by EPA to each generator, transporter, and treatment, storage, or disposal facility.

"EPA region" - the states and territories found in any one of the following ten (10) regions:

Region I - Maine, Vermont, New Hampshire, Massachusetts, Connecticut, and Rhode Island.

Region II - New York, New Jersey, Commonwealth of Puerto Rico, and the U.S. Virgin Islands.

Region III - Pennsylvania, Delaware, Maryland, West Virginia, Virginia, and the District of Columbia.

Region IV - Kentucky, Tennessee, North Carolina, Mississippi, Alabama, Georgia, South Carolina, and Florida.

Region V - Minnesota, Wisconsin, Illinois, Michigan, Indiana and Ohio.

Region VI - New Mexico, Oklahoma, Arkansas, Louisiana, and Texas.

Region VII - Nebraska, Kansas, Missouri, and Iowa.

Region VIII - Montana, Wyoming, North Dakota, South Dakota, Utah, and Colorado.

Region IX - California, Nevada, Arizona, Hawaii, Guam, American Samoa, and Commonwealth of the Northern Mariana Islands.

Region X - Washington, Oregon, Idaho, and Alaska.

"Equipment" - each valve, pump, compressor, pressure relief device, sampling connection system, open-ended valve or line, or flange, and any control devices or systems required by §§4428 through 4431.

"Equivalent method" - any testing or analytical method approved by the Administrator under §§4001.1 through 4001.5 and §§4001.6 through 4001.9.

"Excluded scrap metal" - processed scrap metal, unprocessed home scrap metal, and unprocessed prompt scrap metal.

"Existing hazardous waste management (HWM) facility" or "existing facility" - a facility that was in operation or for which construction commenced on or before November 19, 1980. A facility has commenced construction if the owner or operator has obtained the federal and District approvals or permits necessary to begin physical construction; and either:

- (a) A continuous on-site, physical construction program has begun; or
- (b) The owner or operator has entered into contractual obligations - which cannot be cancelled or modified without substantial loss - for physical construction of the facility to be completed within a reasonable time.

"Existing portion" - that land surface area of an existing waste management unit, included in the original part A permit application, on which wastes have been placed before the issuance of a permit.

"Existing tank" - a tank that is used for the storage or processing of used oil and that is in operation, or for which installation has commenced on or before the effective date of the authorized used oil program in the District. Installation will be considered to have commenced if the owner or operator has obtained all federal and District approvals or permits necessary to begin installation of the tank and if either (1) A continuous on-site installation program has begun, or (2) The owner or operator has entered into contractual obligations--which cannot

be canceled or modified without substantial loss--for installation of the tank to be completed within a reasonable time.

"Existing tank system" or "existing component" - a tank system or component that is used for the storage or treatment of hazardous waste and that is in operation, or for which installation has commenced on or before July 14, 1986. Installation will be considered to have commenced if the owner or operator has obtained all Federal and District approvals or permits necessary to begin physical construction of the site or installation of the tank system and if either (1) a continuous on-site physical construction or installation program has begun, or (2) the owner or operator has entered into contractual obligations - which cannot be canceled or modified without substantial loss - for physical construction of the site or installation of the tank system to be completed within a reasonable time.

"Explosives or munitions emergency" - a situation involving the suspected or detected presence of unexploded ordnance (UXO), damaged or deteriorated explosives or munitions, an improvised explosive device (IED), other potentially explosive material or device, or other potentially harmful military chemical munitions or device, that creates an actual or potential imminent threat to human health, including safety, or the environment, including property, as determined by an explosives or munitions emergency response specialist. These situations may require immediate and expeditious action by an explosives or munitions emergency response specialist to control, mitigate, or eliminate the threat.

"Explosives or munitions emergency response" - all immediate response activities by an explosives and munitions emergency response specialist to control, mitigate, or eliminate the actual or potential threat encountered during an explosives or munitions emergency. An explosives or munitions emergency response may include in-place render-safe procedures, treatment or destruction of the explosives or munitions or transporting those items to another location to be rendered safe, treated, or destroyed. Any reasonable delay in the completion of an explosives or munitions emergency response caused by a necessary, unforeseen, or uncontrollable circumstance will not terminate the explosives or munitions emergency. Explosives and munitions emergency responses can occur on either public or private lands and are not limited to responses at RCRA facilities.

"Explosives or munitions emergency response specialist" - an individual trained in chemical or conventional munitions or explosives handling, transportation, render-safe procedures, or destruction techniques. Explosives or munitions emergency response specialists include Department of Defense (DOD) emergency explosive ordnance disposal (EOD), technical escort unit (TEU), and DOD-certified civilian or contractor personnel; and other Federal, District or local government, or civilian personnel similarly trained in explosives or munitions emergency responses.

"Exporting country" - any designated OECD member country in §4204.11(b) from which a transfrontier movement of wastes is planned or has commenced.

"External floating roof" - a pontoon-type or double-deck type cover that rests on the surface of the material managed in a tank with no fixed roof.

"Face amount" - the total amount the insurer is obligated to pay under the policy.

"Facility" -

- (a) All contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (for example, one or more landfills, surface impoundments, or combinations of them).
- (b) For the purpose of implementing corrective action under §§4412.57 through 4412.59, all contiguous property under the control of the owner or operator seeking a permit under HWMA. This definition also applies to facilities implementing corrective action under RCRA §3008(h) or §§11 and 12 of HWMA (D.C. Code §§6-710 and 6-711).

"Facility mailing list" - the mailing list for a facility maintained by the Department in accordance with §4703.3(a)(4).

"Facility or activity" - any HWM facility or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the HWMA program.

"Fault" - a fracture along which rocks on one side have been displaced with respect to those on the other side.

"Federal agency" - any department, agency, or other instrumentality of the Federal Government, any independent agency or establishment of the Federal Government including any Government corporation, and the Government Printing Office.

"Federal and District approvals or permits necessary to begin physical construction" - permits and approvals required under Federal or District hazardous waste control statutes, regulations or ordinances.

"FIFRA" - the Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136-136y).

"Final closure" - the closure of all hazardous waste management units at the facility in accordance with all applicable closure requirements so that hazardous waste management activities under Chapter 44 of this title and 40 CFR part 265 are no longer conducted at the facility unless subject to the provisions in §4202.6 through §4202.8.

"First attempt at repair" - to take rapid action for the purpose of stopping or reducing leakage of organic material to the atmosphere using best practices.

"Fixed roof" - a cover that is mounted on a unit in a stationary position and does not move with fluctuations in the level of the material managed in the unit.

"Flame zone" - the portion of the combustion chamber in a boiler occupied by the flame envelope.

"Floating roof" - a cover consisting of a double deck, pontoon single deck, or internal floating cover that rests upon and is supported by the material being contained, and is equipped with a continuous seal.

"Flood, one hundred (100) year" - a flood that has a one percent (1%) chance of being equalled or exceeded in any given year.

"Floodplain, one hundred (100) year" - any land area that is subject to a one percent (1%) or greater chance of flooding in any given year from any source.

"Flow indicator" - a device that indicates whether gas flow is present in a vent stream.

"Food-chain crops" - tobacco, crops grown for human consumption, and crops grown for feed for animals whose products are consumed by humans.

"Fractionation operation" - a distillation operation or method used to separate a mixture of several volatile components of different boiling points in successive stages, each stage removing from the mixture some proportion of one of the components.

"Free liquids" - liquids that readily separate from the solid portion of a waste under ambient temperature and pressure.

"Freeboard" - the vertical distance between the top of a tank or surface impoundment dike, and the surface of the waste contained therein.

"Full regulation" - those regulations applicable to generators of either greater than 100 kilograms of hazardous waste per calendar month or greater than the quantity limitations of §4102.5.

"Functionally equivalent component" - a component that performs the same function or measurement and that meets or exceeds the performance specifications of another component.

"Generator" - any person, by site, whose act or process produces hazardous waste identified or listed in Chapter 41 of this title or whose act first causes a hazardous waste to become subject to regulation.

"Ground water" - water below the land surface in a zone of saturation.

"Halogenated organic compounds" or "HOCs" - those compounds having a carbon-halogen bond that are listed under Appendix III to 40 CFR part 268, as incorporated by reference at §5005.1(c).

"Handler of Universal Waste" - a universal waste handler who does not accumulate or store more than one thousand (1,000) kilograms total of universal waste (batteries, pesticides, thermostats, or mercury-containing lamps, calculated collectively) at any time.

"Hard-piping" - pipe or tubing that is manufactured and properly installed in accordance with relevant standards and good engineering practices.

"Hazardous constituent or constituents" - those constituents listed in Appendix II to Chapter 41 of this title.

"Hazardous debris" - debris that contains a hazardous waste listed in §4109 and §4110, or that exhibits a characteristic of hazardous waste identified in §4108.

"Hazardous waste" - a hazardous waste as defined in Section 3 of the Act and as further defined in §§4100.12 through 4100.17.

"Hazardous waste constituent" - a constituent that caused the District to list the hazardous waste in §4109 and §4110, or a constituent listed in §4108.11, Table 3.

"Hazardous Waste Management facility (HWM facility)" - all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (for example, one or more landfills, surface impoundments, or combinations of them).

"Hazardous waste management unit" - a contiguous area of land on or in which hazardous waste is placed, or the largest area in which there is significant likelihood of mixing hazardous waste constituents in the same area. Examples of hazardous waste management units include a surface impoundment, a waste pile, a land treatment area, a landfill cell, an incinerator, a tank and its associated piping and underlying containment system, and a container storage area. A container alone does not constitute a unit; the unit includes containers and the land or pad upon which they are placed.

"Hazardous waste management unit shutdown" - a work practice or operational procedure that stops operation of a hazardous waste management unit or part of a hazardous waste management unit. An unscheduled work practice or operational procedure that stops operation of a hazardous waste management unit or part of a hazardous waste management unit for less than twenty-four (24) hours is not a hazardous waste management unit shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping operation are not hazardous waste management unit shutdowns.

"Hazardous Waste Transfer Facility" - any transportation related building, structure, area or stationary vehicle located on private or public property at which shipments of hazardous waste, universal waste or used oil are held for periods of ten days or less during the normal course of transportation.

"Holocene" - the most recent epoch of the Quarternary period, extending from the end of the Pleistocene to the present.

"Home scrap metal" - scrap metal as generated by steel mills, foundries, and refineries such as turnings, cuttings, punchings, and borings.

"Hot well" - a container for collecting condensate as in a steam condenser serving a vacuum-jet or steam-jet ejector.

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

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

"Household waste" - any material (including garbage, trash, and sanitary wastes in septic tanks) derived from households (including single and multiple residences, hotels and motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day-use recreation areas).

"HSWA tank" - (1) a tank owned or operated by a generator of less than one thousand (1,000) kg of hazardous waste per calendar month, (2) a new underground tank, or (3) an existing underground tank that cannot be entered for inspection. For further reference see 51 Federal Register 25464 (1986), Col. 1.

"HWM facility" - Hazardous Waste Management facility.

"HWMA" - the District of Columbia Hazardous Waste Management Act of 1977, D.C. Law 2-64 (HWMA), as amended.

"Importing country" - any designated OECD country in §4204.11(b) to which a transfrontier movement of wastes is planned or takes place for the purpose of submitting the wastes to recovery operations therein.

"In gas/vapor service" - the piece of equipment that contains or contacts a hazardous waste stream that is in the gaseous state at operating conditions.

"In heavy liquid service" - the piece of equipment that is not in gas/vapor service or in light liquid service.

"In light liquid service" - the piece of equipment that contains or contacts a waste stream where the vapor pressure of one or more of the organic components in the stream is greater than three-tenths (0.3) kilopascals (kPa) at twenty degrees Celsius (20°C), the total concentration of the pure organic components having a vapor pressure greater than three-tenths (0.3) kPa at twenty degrees Celsius (20°C) is equal to or greater than twenty percent (20%) by weight, and the fluid is a liquid at operating conditions.

"In light material service" - the container that is used to manage a material for which both of the following conditions apply: the vapor pressure of one or more of the organic constituents in the material is greater than three-tenths (0.3) kilopascals (kPa) at twenty degrees Celsius (20°C); and the total concentration of the pure organic constituents having a vapor pressure greater than three-tenths (0.3) kPa at twenty degrees Celsius (20°C) is equal to or greater than twenty percent (20%) by weight.

"In operation" - a facility that is treating, storing, or disposing of hazardous waste.

"In situ sampling systems" - nonextractive samplers or in-line samplers.

"In vacuum service" - equipment that is operating at an internal pressure that is at least five (5) kilopascals below ambient pressure.

"Inactive portion" - that portion of a facility that is not operated after the effective date of Chapter 41 of this title. (See also "active portion" and "closed portion".)

"Inactive range" - a military range that is not currently being used, but that is still under military control and considered by the military to be a potential range area, and that has not been put to a new use that is incompatible with range activities.

"Incinerator" - any enclosed device that:

- (a) Uses controlled flame combustion and neither meets the criteria for classification as a boiler, sludge dryer, or carbon regeneration unit, nor is listed as an industrial furnace; or
- (b) Meets the definition of infrared incinerator or plasma arc incinerator.

"Incompatible waste" - a hazardous waste that is unsuitable for:

- (a) Placement in a particular device or facility because it may cause corrosion or decay of containment materials (for example, container inner liners or tank walls); or
- (b) Commingling with another waste or material under uncontrolled conditions because the commingling might produce heat or pressure, fire or explosion, violent reaction, toxic dusts, mists, fumes, or gases, or flammable fumes or gases. (See 40 CFR part 265, Appendix V, for examples.)

"Independently audited" - an audit performed by an independent certified public accountant in accordance with generally accepted auditing standards.

"Individual generation site" - the contiguous site at or on which one or more hazardous wastes are generated. An individual generation site, such as a large manufacturing plant, may have one or more sources of hazardous waste but is considered a single or individual generation site if the site or property is contiguous.

"Industrial furnace" - any of the following enclosed devices that are integral components of manufacturing processes and that use thermal treatment to accomplish recovery of materials or energy:

- (a) Cement kilns
- (b) Lime kilns
- (c) Aggregate kilns
- (d) Phosphate kilns
- (e) Coke ovens
- (f) Blast furnaces
- (g) Smelting, melting and refining furnaces (including pyrometallurgical devices such as cupolas, reverberator furnaces, sintering machine, roasters, and foundry furnaces)
- (h) Titanium dioxide chloride process oxidation reactors
- (i) Methane reforming furnaces
- (j) Pulping liquor recovery furnaces
- (k) Combustion devices used in the recovery of sulfur values from spent sulfuric acid

- (l) Halogen acid furnaces (HAFs) for the production of acid from halogenated hazardous waste generated by chemical production facilities where the furnace is located on the site of a chemical production facility, the acid product has a halogen acid content of at least three percent (3%), the acid product is used in a manufacturing process, and, except for hazardous waste burned as fuel, hazardous waste fed to the furnace has a minimum halogen content of twenty percent (20%) as-generated.
- (m) Such other devices as the Director may, after notice and comment, add to this list on the basis of one or more of the following factors:
 - (1) The design and use of the device primarily to accomplish recovery of material products;
 - (2) The use of the device to burn or reduce raw materials to make a material product;
 - (3) The use of the device to burn or reduce secondary materials as effective substitutes for raw materials, in processes using raw materials as principal feedstocks;
 - (4) The use of the device to burn or reduce secondary materials as ingredients in an industrial process to make a material product;
 - (5) The use of the device in common industrial practice to produce a material product; and
 - (6) Other factors, as appropriate.

"Infrared incinerator" - any enclosed device that uses electric powered resistance heaters as a source of radiant heat followed by an afterburner using controlled flame combustion and that is not listed as an industrial furnace.

"Inground tank" - a device meeting the definition of "tank" in §5400.1 whereby a portion of the tank wall is situated to any degree within the ground, thereby preventing visual inspection of that external surface area of the tank that is in the ground.

"Injection well" - a well into which fluids are injected. (See also "underground injection".)

"Inner liner" - a continuous layer of material placed inside a tank or container that protects the construction materials of the tank or container from the contained waste or reagents used to treat the waste.

"Inorganic metal-bearing waste" - waste for which the Department has established treatment standards for metal hazardous constituents, and which does not otherwise contain significant organic or cyanide content as described in §5000.9(a), and is specifically listed in Appendix XI of 40 CFR part 268, as incorporated by reference at §5005.1(j).

"Installation inspector" - a person who, by reason of his knowledge of the physical sciences and the principles of engineering, acquired by a professional education and related practical experience, is qualified to supervise the installation of tank systems.

"Instrument Measurement Range"- the difference between the minimum and maximum concentration that can be measured by a specific instrument. The minimum is often stated or assumed to be zero and the range expressed only as the maximum.

"Internal floating roof" - a cover that rests or floats on the material surface (but not necessarily in complete contact with it) inside a tank that has a fixed roof.

"International shipment" - the transportation of hazardous waste into or out of the jurisdiction of the United States.

"KiloPascal (kPa)" - the pressure one Newton per square meter (Pascal) times 10^3 .

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

"Landfill" - a disposal facility or part of a facility where hazardous waste is placed in or on land and that is not a pile, a land treatment facility, a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground mine, a cave, or a corrective action management unit.

"Landfill cell" - a discrete volume of a hazardous waste landfill that uses a liner to provide isolation of wastes from adjacent cells or wastes. Examples of landfill cells are trenches and pits.

"Land treatment facility" - a facility or part of a facility at which hazardous waste is applied onto or incorporated into the soil surface; these facilities are disposal facilities if the waste will remain after closure.

"Leachate" - any liquid, including any suspended components in the liquid, that has percolated through or drained from hazardous waste.

"Leak-detection system" - a system capable of detecting the failure of either the primary or secondary containment structure or the presence of a release of hazardous waste or accumulated liquid in the secondary containment structure. This system shall employ operational controls (for example, daily visual inspections for releases into the secondary containment system of aboveground tanks) or consist of an interstitial monitoring device designed to detect continuously and automatically the failure of the primary or secondary containment structure or the presence of a release of hazardous waste into the secondary containment structure.

"Legal defense costs" - any expenses that an insurer incurs in defending against claims of third parties brought under the terms and conditions of an insurance policy.

"Liabilities" - probable future sacrifices of economic benefits arising from present obligations to transfer assets or provide services to other entities in the future as a result of past transactions or events.

"Liner" - a continuous layer of natural or man-made materials, beneath or on the sides of a surface impoundment, landfill, or landfill cell, that restricts the downward or lateral escape of hazardous waste, hazardous waste constituents, or leachate.

"Liquid-mounted seal" - a foam or liquid-filled primary seal mounted in contact with the hazardous waste between the tank wall and the floating roof continuously around the circumference of the tank.

"Major facility" - any facility or activity classified as such by the Director.

"Malfunction", as used in §§4428 through 4431, - any sudden failure of a control device or a hazardous waste management unit or failure of a hazardous waste management unit to operate in a normal or usual manner, so that organic emissions are increased.

"Management" or "hazardous waste management" - the systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous waste.

"Manifest" - the form used for identifying the quantity, composition, and the origin, routing and destination of hazardous waste during its transportation from the point of generation to the point of disposal, treatment or storage; specifically, the shipping document EPA form 8700-22 and, if necessary, EPA form 8700-22A, originated and signed by the generator in accordance with the instructions included in the Appendix to 40 CFR part 262, as incorporated by reference at §4209.1.

"Manifest document number" - the U.S. EPA twelve (12) digit identification number assigned to the generator plus a unique five (5) digit document number assigned to the Manifest by the generator for recording and reporting purposes.

"Mercury-containing lamp" - an electric lamp in which mercury is purposely introduced by the manufacturer for the operation of the lamp, including fluorescent lamps, mercury lamps, metal halide lamps, and high pressure sodium lamps. This term excludes mercury-containing lamps used in residential applications disposed of as part of ordinary household waste.

"Metallic shoe seal" - a continuous seal that is constructed of metal sheets that are held vertically against the wall of the tank by springs, weighted levers, or other mechanisms and is connected to the floating roof by braces or other means. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

"Military" - the Department of Defense (DOD), the Armed Services, Coast Guard, National Guard, Department of Energy (DOE), or other parties under contract or acting as an agent for the foregoing, who handle military munitions.

"Military munitions" - all ammunition products and components produced or used by or for the U.S. Department of Defense or the U.S. Armed Services for national defense and security, including military munitions under the control of the Department of Defense, the U.S. Coast Guard, the U.S. Department of Energy (DOE), and National Guard personnel. The term military munitions includes: confined gaseous, liquid, and solid propellants, explosives, pyrotechnics, chemical and riot control agents, smokes, and incendiaries used by DOD components, including bulk explosives and chemical warfare agents, chemical

munitions, rockets, guided and ballistic missiles, bombs, warheads, mortar rounds, artillery ammunition, small arms ammunition, grenades, mines, torpedoes, depth charges, cluster munitions and dispensers, demolition charges, and devices, and components thereof. Military munitions do not include wholly inert items, improvised explosive devices, and nuclear weapons, nuclear devices, and nuclear components thereof. However, the term does include non-nuclear components of nuclear devices, managed under DOE's nuclear weapons program after all required sanitization operations under the Atomic Energy Act of 1954, as amended, have been completed.

"Military range" - designated land and water areas set aside, managed, and used to conduct research on, develop, test, and evaluate military munitions and explosives, other ordnance, or weapon systems, or to train military personnel in their use and handling. Ranges include firing lines and positions, maneuver areas, firing lanes, test pads, detonation pads, impact areas, and buffer zones with restricted access and exclusionary areas.

"Mining overburden returned to the mine site" - any material overlying an economic mineral deposit that is removed to gain access to that deposit and is then used for reclamation of a surface mine.

"Miscellaneous unit" - a hazardous waste management unit where hazardous waste is treated, stored, or disposed of and that is not a container, tank, surface impoundment, pile, land treatment unit, landfill, incinerator, boiler, industrial furnace, underground injection well with appropriate technical standards under 40 CFR 146, containment building, corrective action management unit, or unit eligible for research, development, and demonstration permit under §§4619.4 through 4619.7.

"Movement" - that hazardous waste transported to a facility in an individual vehicle.

"National Pollutant Discharge Elimination System" - the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under sections 307, 402, 318, and 405 of the CWA. The term includes an approved District of Columbia program.

"Net working capital" - current assets minus current liabilities.

"Net worth" - total assets minus total liabilities; equivalent to owner's equity.

"New hazardous waste management facility" or "new facility" - a facility that began operation, or for which construction commenced after October 21, 1976. (See also "Existing hazardous waste management facility".) For the purposes of Chapters 46 and 47, "New HWM facility" means a Hazardous Waste Management facility that began operation or for which construction commenced after November 19, 1980.

"New tank" - a tank that will be used to store or process used oil and for which installation has commenced after the effective date of the authorized used oil program in the District.

"New tank system" or "new tank component" - a tank system or component that will be used for the storage or treatment of hazardous waste and for which installation has commenced after July 14, 1986, for HSWA tanks, as defined in §5400.1 and March 1, 1996, for non-HSWA tanks, as defined in §5400.1; except, however, for purposes of §4416.22(b) and 40

CFR 265.193(g)(2), a new tank system is one for which construction commences after July 14, 1986, for HSWA tanks and March 1, 1996, for non-HSWA tanks. (See also "existing tank system.")

"Non-HSWA tank" - all tanks except: 1) those that are owned or operated by a generator of less than one thousand kilograms (1,000 kg) of hazardous waste in a calendar month, 2) those that are new underground tanks, and 3) those that are existing underground tanks that cannot be entered for inspection. For further reference, see 51 Federal Register 25464 (1986), Col. 1.

"No detectable organic emissions" - no escape of organics to the atmosphere as determined using the procedure specified in §4401.

"Nonsudden accidental occurrence" - an occurrence that takes place over time and involves continuous or repeated exposure.

"Nonwastewaters" - wastes that do not meet the criteria for wastewaters as defined in §5400.1.

"Notifier" - the person under the jurisdiction of the exporting country who has, or will have at the time the planned transfrontier movement commences, possession or other forms of legal control of the wastes and who proposes their transfrontier movement for the ultimate purpose of submitting them to recovery operations. When the United States (U.S.) is the exporting country, notifier is interpreted to mean a person domiciled in the U.S.

"NPDES" - National Pollutant Discharge Elimination System.

"OECD area" - all land or marine areas under the national jurisdiction of any designated OECD member country in §4204.11. When the regulations refer to shipments to or from an OECD country, this means OECD area.

"Off-site" - any site that is not on-site.

"On ground tank" - a device meeting the definition of "tank" in §5400.1 and that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface so that the external tank bottom cannot be visually inspected.

"On-site" - the same or geographically contiguous property that may be divided by public or private right-of-way, provided the entrance and exit between the properties is at a cross-roads intersection, and access is by crossing as opposed to going along, the right-of-way. Non-contiguous properties owned by the same person but connected by a right-of-way that he or she controls and to which the public does not have access, is also considered on-site property.

"Open burning" - the combustion of any material without the following characteristics:

- (a) Control of combustion air to maintain adequate temperature for efficient combustion,

- (b) Containment of the combustion-reaction in an enclosed device to provide sufficient residence time and mixing for complete combustion; and
- (c) Control of emission of the gaseous combustion products.

(See also "incineration" and "thermal treatment".)

"Open-ended valve or line" - any valve, except pressure relief valves, having one side of the valve seat in contact with process fluid and one side open to the atmosphere, either directly or through open piping.

"Operator" - the person responsible for the overall operation of a facility.

"Owner" - the person who owns a facility or part of a facility.

"Owner or operator" - the owner or operator of any facility or activity subject to regulation under HWMA.

"Parent corporation" - a corporation that directly owns at least fifty (50) percent of the voting stock of the corporation that is the facility owner or operator; the latter corporation is deemed a "subsidiary" of the parent corporation.

"Part A" - the portion of the HWMA permit application that consists of Forms 1 and 3 of the Consolidated Permit Application Forms. For existing facilities, the part A portion of the application satisfies the requirement to submit an application and in general serves as notification to the Department. Specific information requirements are addressed at §4602. For new facilities, both the part A and part B portions of the application must be submitted at least 180 days before physical construction begins on the facility.

"Part B" - the portion of the HWMA permit application that is submitted as a narrative containing the information in the applicable sections of §§4603 through 4612. For existing facilities, the Director sets a date at least six months after receiving the part A application for the submission of part B. For new facilities, both the part A and part B portions of the application must be submitted at least 180 days before physical construction begins on the facility.

"Partial closure" - the closure of a hazardous waste management unit in accordance with the applicable closure requirements of Chapter 44 of this title, including the interim status standards at §4401, at a facility that contains other active hazardous waste management units. For example, partial closure may include the closure of a tank (including its associated piping and underlying containment systems), landfill cell, surface impoundment, waste pile, or other hazardous waste management unit, while other units of the same facility continue to operate.

"Permit" - an authorization, license, or equivalent control document issued by EPA or the District to implement the requirements of Chapter 46 and Chapter 47. Permit includes permit by rule (§4619.1), and emergency permit (§§4619.2 and 4619.3). Permit does not include RCRA interim status (§4620), or any permit that has not yet been the subject of final Department action, such as a draft permit or a proposed permit.

"Permit-by-rule" - a provision of these regulations stating that a facility or activity is deemed to have a TSD facility permit if it meets the requirements of the provision.

"Person" - an individual, trust, firm, joint stock company, Federal Agency, corporation (including a government corporation), partnership, association, District, State, municipality, commission, political subdivision of a State or the District, any interstate body, or an agent or employee thereof.

"Personnel" or "facility personnel" - all persons who work at, or oversee the operations of, a hazardous waste facility, and whose actions or failure to act may result in noncompliance with the requirements of Chapter 44 of this title.

"Pesticide" - any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest, or intended for use as a plant regulator, defoliant, or desiccant, other than any article that:

- (a) Is a new animal drug under FFDCA (Federal Food, Drug, and Cosmetic Act) section 201(w); or
- (b) Is an animal drug that has been determined by regulation of the Secretary of Health and Human Services not to be a new animal drug; or
- (c) Is an animal feed under FFDCA section 201(x) that bears or contains any substances described by paragraph (a) or (b) of this definition.

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

"Physical construction" - excavation, movement of earth, erection of forms or structures, or similar activity to prepare an HWM facility to accept hazardous waste.

"Pile" - any non-containerized accumulation of solid, nonflowing hazardous waste that is used for treatment or storage and that is not a containment building.

"Plasma arc incinerator" - any enclosed device using a high intensity electrical discharge or arc as a source of heat followed by an afterburner using controlled flame combustion and that is not listed as an industrial furnace.

"Point of waste origination":

- (a) When the facility owner or operator is the generator of the hazardous waste, the point of waste origination means the point where a solid waste produced by a system, process, or waste management unit is determined to be a hazardous waste as defined in Chapter 41.

[Note: In this case, this term is being used in a manner similar to the use of the term "point of generation" in air standards established for waste management operations under authority of the Clean Air Act in 40 CFR parts 60, 61, and 63.]

- (b) When the facility owner and operator are not the generator of the hazardous waste, point of waste origination means the point where the owner or operator accepts delivery or takes possession of the hazardous waste.

"Point of waste treatment" - the point where a hazardous waste to be treated in accordance with §4401 exits the treatment process. Any waste determination shall be made before the waste is conveyed, handled, or otherwise managed in a manner that allows the waste to volatilize to the atmosphere.

"Point source" - any discernible, confined, and discrete conveyance, including, but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture.

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

"Post-closure plan" - the plan for post-closure care prepared in accordance with the requirements of §§4413.17 through 4413.30.

"POTW" - publicly owned treatment works.

"Pressure release" - the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device.

"Primary Exporter" - any person who is required to originate the manifest for a shipment of hazardous waste in accordance with §4201, or equivalent District provision, which specifies a treatment, storage, or disposal facility in a receiving country as the facility to which the hazardous waste will be sent and any intermediary arranging for the export.

"Process heater" - a device that transfers heat liberated by burning fuel to fluids contained in tubes, includes all fluids except water that are heated to produce steam.

"Process vent" - any open-ended pipe or stack that is vented to the atmosphere either directly, through a vacuum-producing system, or through a tank (for example, distillate receiver, condenser, bottoms receiver, surge control tank, separator tank, or hot well) associated with hazardous waste distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations.

"Processed scrap metal" - scrap metal that has been manually or physically altered to either separate it into distinct materials to enhance economic value or to improve the handling of materials. Processed scrap metal includes, but is not limited to scrap metal that has been baled, shredded, sheared, chopped, crushed, flattened, cut, melted, or separated by metal type (for example, sorted), and, fines, drosses and related materials that have been agglomerated. (Note: shredded circuit boards being sent for recycling are not considered processed scrap metal. They are covered under the exclusion from the definition of solid waste for shredded circuit boards being recycled (§4101.1(p)).

"Processing" - chemical or physical operations designed to produce from used oil, or to make used oil more amenable for production of, fuel oils, lubricants, or other used oil-derived

product. Processing includes, but is not limited to: blending used oil with virgin petroleum products, blending used oils to meet the fuel specification, filtration, simple distillation, chemical or physical separation and re-refining.

"Prompt scrap metal" - scrap metal as generated by the metal working/fabrication industries and includes such scrap metal as turnings, cuttings, punchings, and borings. Prompt scrap is also known as industrial or new scrap metal.

"Property damage" - has the meaning given by applicable District law. However, property damage does not include those liabilities that, consistent with standard insurance industry practice, are excluded from coverage in liability policies.

"Publicly owned treatment works" or "POTW" - any device or system used in the treatment (including recycling and reclamation) of municipal sewage or industrial wastes of a liquid nature that is owned by a "State" or "municipality" (as defined by section 502(4) of the CWA). This definition includes sewers, pipes, or other conveyances only if they convey wastewater to a POTW providing treatment.

"Qualified Ground-Water Scientist" - a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering, and has sufficient training and experience in ground-water hydrology and related fields as may be demonstrated by State or District registration, professional certifications, or completion of accredited university courses that enable that individual to make sound professional judgements regarding ground-water monitoring and contaminant fate and transport.

"RCRA" - the Solid Waste Disposal Act as amended by the Resource Conservation and Recovery Act of 1976 (Pub. L. 94-580, as amended by Pub. L. 95-609 and Pub. L. 96-482, 42 U.S.C. §6901 *et seq.*)

"Receiving country" - a foreign country to which a hazardous waste is sent for the purpose of treatment, storage or disposal (except short-term storage incidental to transportation).

"Reclaimed" - a material that is processed to recover a usable product, or that is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents.

"Recognized trader" - a person who, with appropriate authorization of concerned countries, acts in the role of principal to purchase and subsequently sell wastes; this person has legal control of the wastes from time of purchase to time of sale; this person may act to arrange and facilitate transfrontier movements of wastes destined for recovery operations.

"Recovery facility" - an entity which, under applicable domestic law, is operating or is authorized to operate in the importing country to receive wastes and to perform recovery operations on them.

"Recovery operations" - activities leading to resource recovery, recycling, reclamation, direct re-use or alternative uses as listed in Table 2.B of the Annex of OECD Council Decision C(88)90(Final) of 27 May 1988, (available from the Environmental Protection Agency, RCRA Information Center (RIC), 1235 Jefferson-Davis Highway, First Floor, Arlington, VA 22203 (Docket # F-94-IEHF-FFFFF) and the Organisation for Economic Co-operation and

Development, Environment Directorate, 2 rue Andre Pascal, 75775 Paris Cedex 16, France) which include:

- R1 Use as a fuel (other than in direct incineration) or other means to generate energy
- R2 Solvent reclamation/regeneration
- R3 Recycling/reclamation of organic substances that are not used as solvents
- R4 Recycling/reclamation of metals and metal compounds
- R5 Recycling/reclamation of other inorganic materials
- R6 Regeneration of acids or bases
- R7 Recovery of components used for pollution control
- R8 Recovery of components from catalysts
- R9 Used oil re-refining or other reuses of previously used oil
- R10 Land treatment resulting in benefit to agriculture or ecological improvement
- R11 Uses of residual materials obtained from any of the operations numbered R1-R10
- R12 Exchange of wastes for submission to any of the operations numbered R1-R11; and
- R13 Accumulation of material intended for any operation in Table 2.B

A material is "recycled" if it is used, reused, or reclaimed.

"Regional Administrator" - the Regional Administrator for the EPA Region in which the facility is located, or his designee.

"Remediation waste" - all solid and hazardous wastes, and all media (including groundwater, surface water, soils, and sediments) and debris, that contain listed hazardous wastes or that themselves exhibit a hazardous waste characteristic, that are managed for the purpose of implementing corrective action requirements under §§4412.57 through 4412.59 and RCRA §3008(h) or §§11 and 12 of HWMA (D.C.Code §§6-710 and 6-711). For a given facility, remediation wastes may originate only from within the facility boundary, but may include waste managed in implementing §4(b) of HWMA (D.C. Code §6-703(b)), RCRA §3008(h) and §§11 and 12 of HWMA (D.C.Code §§6-710 and 6-711) for releases beyond the facility boundary.

"Repaired" - that equipment is adjusted, or otherwise altered, to eliminate a leak.

"Replacement unit" - a landfill, surface impoundment, or waste pile unit (1) from which all or substantially all of the waste is removed, and (2) that is subsequently reused to treat, store, or dispose of hazardous waste. "Replacement unit" does not apply to a unit from which waste is removed during closure, if the subsequent reuse solely involves the disposal of waste from that unit and other closing units or corrective action areas at the facility, in accordance with an approved closure plan or District approved corrective action.

"Representative sample" - a sample of a universe or whole (for example, waste pile, lagoon, ground water) that can be expected to exhibit the average properties of the universe or whole.

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

"Response Time" - the time interval between the start of a step change in the system input (for example, change of calibration gas) and the time when the data recorder displays 95 percent of the final value.

"Revocation of a permit" - the process of invalidating a permit. The person whose permit has been revoked shall have no authority to undertake any activities that require the permit.

"Run-off" - any rainwater, leachate, or other liquid that drains over land from any part of a facility.

"Run-on" - any rainwater, leachate, or other liquid that drains over land onto any part of a facility.

"Safety device" - a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device that functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purpose of §§4474 through 4482, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to adjust the pressure in this vapor headspace in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the owner or operator based on manufacturer recommendations, applicable regulations, fire protection and prevention codes, standard engineering codes and practices, or other requirements for the safe handling of flammable, ignitable, explosive, reactive, or hazardous materials.

"Saturated zone" or "zone of saturation" - that part of the earth's crust in which all voids are filled with water.

"Schedule of compliance" - a schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) leading to compliance with the Act and regulations.

"Scrap metal" - bits and pieces of metal parts (for example, bars, turnings, rods, sheets, and wire) or metal pieces that may be combined together with bolts or soldering (for example, radiators, scrap automobiles, and railroad box cars), which when worn or superfluous can be recycled.

"SDWA" - the Safe Drinking Water Act (Pub. L. 93-523 (1974), as amended by Pub. L. 95-100 (1972) and Pub. L. 100-572 (1988); 42 U.S.C. 300f *et seq.*).

"Sensor" - a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

"Separator tank" - a device used for separation of two immiscible liquids.

"Single-seal system" - a floating roof having one continuous seal. This seal may be vapor-mounted, liquid-mounted, or a metallic shoe seal.

"Site" - the land or water area where any facility or activity is physically located or conducted, including adjacent land used in connection with the facility or activity.

"Sludge" - any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant.

"Sludge dryer" - any enclosed thermal treatment device that is used to dehydrate sludge and that has a maximum total thermal input, excluding the heating value of the sludge itself, of 2,500 Btu/lb of sludge treated on a wet-weight basis.

"Small Quantity Generator" - a generator who generates no more than 100 kilograms of hazardous waste in a calendar month and meets the quantity limits of §4102.5.

"Soil" - 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. Soil Conservation Service, or a mixture of these materials with liquids, sludges or solids that is inseparable by simple mechanical removal processes and is made up primarily of soil by volume based on visual inspection.

"Solid waste" - a solid waste as defined in §§4100.4 through 4100.10.

"Solvent extraction operation" - an operation or method of separation in which a solid or solution is contacted with a liquid solvent (the two being mutually insoluble) to preferentially dissolve and transfer one or more components into the solvent.

"Sorbent" - a material that is used to soak up free liquids by either adsorption or absorption, or both. Sorb means to either adsorb or absorb, or both.

"Span or Span Value" - Full scale instrument measurement range.

A "spent material" - any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing.

"Startup" - the setting in operation of a hazardous waste management unit or control device for any purpose.

"State" - any of the several States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

"Steam stripping operation" - a distillation operation in which vaporization of the volatile constituents of a liquid mixture takes place by the introduction of steam directly into the charge.

"Storage" - containment in such a manner as not to constitute disposal; and when referring specifically to storage of hazardous waste, the holding of hazardous waste for a temporary period at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.

"Substantial business relationship" - the extent of a business relationship necessary under applicable State or District law to make a guarantee contract issued incident to that relationship valid and enforceable. A "substantial business relationship" must arise from a pattern of recent or ongoing business transactions, in addition to the guarantee itself, such that a currently existing business relationship between the guarantor and the owner or operator is demonstrated to the satisfaction of the applicable EPA Regional Administrator.

"Sudden accidental occurrence" - an occurrence that is not continuous or repeated in nature.

"Sump" - any pit or reservoir that meets the definition of tank and those troughs/trenches connected to it that serve to collect hazardous waste for transport to hazardous waste storage, treatment, or disposal facilities; except that as used in the landfill, surface impoundment, and waste pile rules, "sump" means any lined pit or reservoir that serves to collect liquids drained from a leachate collection and removal system or leak detection system for subsequent removal from the system.

"Surface impoundment" or "impoundment" - a facility or part of a facility that is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling, and aeration pits, ponds, and lagoons.

"Surge control tank" - a large-sized pipe or storage reservoir sufficient to contain the surging liquid discharge of the process tank to which it is connected.

"Suspension of a permit" - the process of prohibiting the holder of the permit from conducting any business or activities that require a permit, except with the specific authorization of the Director. A person whose permit is suspended may reapply for a valid permit and the suspension may be lifted if the person can demonstrate an ability and willingness to comply with the terms of the permit.

"Tangible net worth" - the tangible assets that remain after deducting liabilities; these assets would not include intangibles such as goodwill and rights to patents or royalties.

"Tank" - a stationary device, designed to contain an accumulation of hazardous waste that is constructed primarily of non-earthen materials (for example, wood, concrete, steel, plastic) that provide structural support.

"Tank system" - a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system.

"Thermal treatment" - the treatment of hazardous waste in a device that uses elevated temperatures as the primary means to change the chemical, physical, or biological character or composition of the hazardous waste. Examples of thermal treatment processes are incineration, molten salt, pyrolysis, calcination, wet air oxidation, and microwave discharge. (See also "incinerator" and "open burning".)

"Thermostat" - a temperature control device that contains metallic mercury in an ampule attached to a bimetal sensing element, and mercury-containing ampules that have been

removed from these temperature control devices in compliance with the requirements of §4801.9(b).

"Thin-film evaporation operation" - a distillation operation that employs a heating surface consisting of a large diameter tube that may be either straight or tapered, horizontal or vertical. Liquid is spread on the tube wall by a rotating assembly of blades that maintain a close clearance from the wall or actually ride on the film of liquid on the wall.

"Totally enclosed treatment facility" - a facility for the treatment of hazardous waste that is directly connected to an industrial production process and that is constructed and operated in a manner that prevents the release of any hazardous waste or any constituent thereof into the environment during treatment. An example is a pipe in which waste acid is neutralized.

"Transfer facility" - any transportation related facility including loading docks, parking areas, storage areas and other similar areas where shipments of hazardous waste are held for a period of ten (10) days or less during the normal course of transportation.

"Transfrontier movement" - any shipment of wastes destined for recovery operations from an area under the national jurisdiction of one OECD member country to an area under the national jurisdiction of another OECD member country.

"Transit country" - any foreign country, other than a receiving country, through which a hazardous waste is transported.

"Transport vehicle" - a motor vehicle or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (for example, trailer, railroad freight car) is a separate transport vehicle.

"Transportation" - the movement of hazardous waste by air, rail, highway, or water.

"Transporter" - a person engaged in the offsite transportation of hazardous waste by air, rail, highway, or water.

"Treatability Study" - a study in which a hazardous waste is subjected to a treatment process to determine: (1) Whether the waste is amenable to the treatment process, (2) what pretreatment (if any) is required, (3) the optimal process conditions needed to achieve the desired treatment, (4) the efficiency of a treatment process for a specific waste or wastes, or (5) the characteristics and volumes of residuals from a particular treatment process. Also included in this definition for the purpose of the §§4101.5 through 4101.9 exemptions are liner compatibility, corrosion, and other material compatibility studies and toxicological and health effects studies. A "treatability study" is not a means to commercially treat or dispose of hazardous waste.

"Treatment" - any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize that waste, or so as to recover energy or material resources from the waste, or so as to render the waste non-hazardous, or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume.

"Treatment zone" - a soil area of the unsaturated zone of a land treatment unit within which hazardous constituents are degraded, transformed, or immobilized.

"UIC" - the Underground Injection Control Program under part C of the Safe Drinking Water Act, including an approved program.

"Underground injection" - the subsurface emplacement of fluids through a bored, drilled or driven well; or through a dug well, where the depth of the dug well is greater than the largest surface dimension. (See also "injection well".)

"Underground source of drinking water (USDW)" - an aquifer or its portion:

- (a) Which supplies any public water system; or
- (b) Which contains a sufficient quantity of ground water to supply a public water system; and
 - (1) Currently supplies drinking water for human consumption; or
 - (2) Contains fewer than ten thousand (10,000) mg/l total dissolved solids; and
- (c) Which is not an exempted aquifer.

"Underground tank" - a device meeting the definition of "tank" in §5400.1 whose entire surface area is totally below the surface of and covered by the ground.

"Underlying hazardous constituent" - any constituent listed in 40 CFR 268.48, Table UTS--Universal Treatment Standards, as incorporated by reference at §5003.13, 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.

"Unexploded ordnance (UXO)" - military munitions that have been primed, fused, armed, or otherwise prepared for action, and have been fired, dropped, launched, projected, or placed in such a manner as to constitute a hazard to operations, installation, personnel, or material and remain unexploded either by malfunction, design, or any other cause.

"Unfit-for use tank system" - a tank system that has been determined through an integrity assessment or other inspection to be no longer capable of storing or treating hazardous waste without posing a threat of release of hazardous waste to the environment.

"Uniform Manifest" or "Manifest" - the EPA required shipping document originated and signed by the generator.

"United States" - the 50 States, the District of Columbia, the Commonwealth of Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

"Universal Waste" - any of the following hazardous wastes that are managed under the universal waste requirements of Chapter 48:

- (a) Batteries as described in §§4800.3 through 4800.7;
- (b) Pesticides as described in §§4800.8 through 4800.12; and
- (c) Thermostats as described in §§4800.13 through 4800.16.
- (d) Fluorescent light bulbs and mercury-containing lamps as described in §4807.

"Universal Waste Handler":

- (a) Means:
 - (1) A generator (as defined in this section) of universal waste; or
 - (2) The owner or operator of a facility, including all contiguous property, that receives universal waste from other universal waste handlers, accumulates universal waste, and sends universal waste to another universal waste handler, to a destination facility, or to a foreign destination.
- (b) Does not mean:
 - (1) A person who treats (except under the provisions of §4801.7 or §4801.9), disposes of, or recycles universal waste; or
 - (2) A person engaged in the off-site transportation of universal waste by air, rail, highway, or water, including a universal waste transfer facility.

"Universal Waste Transfer Facility" - any transportation-related facility including loading docks, parking areas, storage areas and other similar areas where shipments of universal waste are held during the normal course of transportation for ten days or less.

"Universal Waste Transporter" - a person engaged in the off-site transportation of universal waste by air, rail, highway, or water.

"Unsaturated zone" or "zone of aeration" - the zone between the land surface and the water table.

"Uppermost aquifer" - the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

"USDW" - underground source of drinking water.

"Used or reused" - a material that is either:

- (a) Employed as an ingredient (including use as an intermediate) in an industrial process to make a product (for example, distillation bottoms from one process used as feedstock in another process). However, a material will not satisfy this condition if distinct components of the material are recovered as separate end products (as when metals are recovered from metal-containing secondary materials); or

- (b) Employed in a particular function or application as an effective substitute for a commercial product (for example, spent pickle liquor used as phosphorous precipitant and sludge conditioner in wastewater treatment).

"Used oil" - any oil that has been refined from crude oil, or any synthetic oil, that has been used and as a result of this use is contaminated by physical or chemical impurities.

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

"Used oil burner" - a facility where used oil not meeting the specification requirements in §4900.15 is burned for energy recovery in devices identified in §4905.

"Used oil collection center" - any site or facility that is registered/licensed/permitted/recognized by a state/District/county/municipal government to manage used oil and accepts/aggregates and stores used oil collected from used oil generators regulated under §4901 who bring used oil to the collection center in shipments of no more than 55 gallons under the provisions of §§4901.7. Used oil collection centers may also accept used oil from household do-it-yourselfers.

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

- (a) Directs a shipment of off-specification used oil from his or her facility to a used oil burner; or
- (b) First claims that used oil that is to be burned for energy recovery meets the used oil fuel specifications set forth in §4900.15.

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

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

"Used oil transfer facility" - any transportation related facility including loading docks, parking areas, storage areas and other areas where shipments of used oil are held for more than twenty-four (24) hours and not longer than thirty-five (35) days during the normal course of transportation or prior to an activity performed pursuant to §§4901.2 and 4901.3. Transfer facilities that store used oil for more than thirty-five (35) days are subject to regulation under §4904.

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

to produce (or make more amenable for production of) used oil derived products or used oil fuel.

"Vapor incinerator" - any enclosed combustion device that is used for destroying organic compounds and does not extract energy in the form of steam or process heat.

"Vapor-mounted seal" - a continuous seal that is mounted such that there is a vapor space between the hazardous waste in the unit and the bottom of the seal.

"Vented" - discharged through an opening, typically an open-ended pipe or stack, allowing the passage of a stream of liquids, gases, or fumes into the atmosphere. The passage of liquids, gases, or fumes is caused by mechanical means such as compressors or vacuum-producing systems or by process-related means such as evaporation produced by heating and not caused by tank loading and unloading (working losses) or by natural means such as diurnal temperature changes.

"Vessel" - includes every description of watercraft, used or capable of being used as a means of transportation on the water.

"Volatile organic concentration" or "VO concentration" - the fraction by weight of the volatile organic compounds contained in a hazardous waste expressed in terms of parts per million (ppmw) as determined by direct measurement or by knowledge of the waste in accordance with the requirements of 40 CFR 265.1084 as restricted by §4401.2(q). For the purpose of determining the VO concentration of a hazardous waste, organic compounds with a Henry's law constant value of at least one-tenth (0.1) mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) (which can also be expressed as 1.8×10^6 atmospheres/gram-mole/m³) at twenty-five degrees Celsius (25° Celsius) must be included. §4496.1(d) presents a list of compounds known to have a Henry's law constant value less than the cutoff level.

"Washout" - the movement of hazardous waste from the active portion of a facility as a result of flooding.

"Waste determination" - performing all applicable procedures in accordance with the requirements of 40 CFR 265.1084 as restricted by §4401.2(q) to determine whether a hazardous waste meets standards specified in 40 CFR 265, Subpart CC as restricted by §4401.2(q). Examples of a waste determination include performing the procedures in accordance with the requirements of 40 CFR 265.1084 as restricted by §4401.2(q) to determine the average VO concentration of a hazardous waste at the point of waste origination; the average VO concentration of a hazardous waste at the point of waste treatment and comparing the results to the exit concentration limit specified for the process used to treat the hazardous waste; the organic reduction efficiency and the organic biodegradation efficiency for a biological process used to treat a hazardous waste and comparing the results to the applicable standards; or the maximum volatile organic vapor pressure for a hazardous waste in a tank and comparing the results to the applicable standards.

"Waste stabilization process" - any physical or chemical process used to either reduce the mobility of hazardous constituents in a hazardous waste or eliminate free liquids as determined by Test Method 9095 (Paint Filter Liquids Test) in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846, Third Edition, September 1986, as amended by Update I, November 15, 1992 (incorporated by reference-refer to §4017(m)).

A waste stabilization process includes mixing the hazardous waste with binders or other materials, and curing the resulting hazardous waste and binder mixture. Other synonymous terms used to refer to this process are "waste fixation" or "waste solidification." This does not include the adding of absorbent materials to the surface of a waste, without mixing, agitation, or subsequent curing, to absorb free liquid.

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

"Wastewater treatment unit" - a device that:

- (a) Is part of a wastewater treatment facility that is subject to regulation under either sections 3 and 7 of the Water Pollution Control Act of 1984 (D.C. Code §§6-922 and 926) or the Wastewater System Regulation Amendment Act of 1985, (D.C. Code §§6-951 *et seq.*); and
- (b) Receives and treats or stores an influent wastewater that is a hazardous waste as defined in §§4100.12 through 4100.17, or that generates and accumulates a wastewater treatment sludge that is a hazardous waste as defined in §§4100.12 through 4100.17, or treats or stores a wastewater treatment sludge that is a hazardous waste as defined in §§4100.12 through 4100.17; and
- (c) Meets the definition of tank or tank system in §5400.1.

"Water (bulk shipment)" - the bulk transportation of hazardous waste that is loaded or carried on board a vessel without containers or labels.

"Well" - any shaft or pit dug or bored into the earth, generally of a cylindrical form, and often walled with bricks or tubing to prevent the earth from caving in.

"Well injection:" (See "underground injection".)

"Zone of engineering control" - an area under the control of the owner/operator that, upon detection of a hazardous waste release, can be readily cleaned up prior to the release of hazardous waste or hazardous constituents to ground water or surface water.

Persons may comment on the proposed amendments to the regulations within 30 days of publication of this notice by writing to Mr. Angelo Tompros, Program Manager, Hazardous Waste Division, Bureau of Hazardous Material and Toxic Substances, Environmental Health Administration, Department of Health, 51 N Street, N.E., 3rd Floor, Washington, D.C. 20002. Please place the words: "Comments on Amendments to Hazardous Waste Regulations" conspicuously on the envelope in which your comments are mailed. Copies of the proposed regulations may be obtained upon request at the above address upon payment of a reasonable fee.