

Chapter NR 668

HAZARDOUS WASTE LAND DISPOSAL RESTRICTIONS

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Note: This chapter is similar to federal regulations contained in 40 CFR part 268, revised as of July 1, 2003.

Subchapter A — General

NR 668.01 Purpose, scope and applicability.

(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.

(2) Except as specifically provided otherwise in this chapter or ch. NR 661, 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.

(3) Restricted wastes may continue to be land disposed if any of the following conditions are met:

(a) The EPA administrator has granted an extension to the effective date of a prohibition under 40 CFR 268.5 with respect to those wastes covered by the extension.

(b) The EPA administrator has granted an exemption from a prohibition pursuant to a petition under 40 CFR 268.6, with respect to those wastes and units covered by the petition.

(d) The wastes are hazardous only because they exhibit a hazardous characteristic, unless the wastes are subject to a specified method of treatment other than DEACT in s. NR 668.40, or are D003 reactive cyanide and the wastes meet subs. 1. or 2. or 3. and subd. 4.

1. The wastes are managed in a treatment system which subsequently discharges to waters of the state pursuant to a permit issued under ch. 283, Stats.

2. The wastes are treated for purposes of the pretreatment requirements of ch. 283, Stats.

3. The wastes are managed in a zero discharge system engaged in CWA-equivalent treatment as defined in s. NR 668.37.

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

(4) The requirements of this chapter may not affect the availability of a waiver under 42 USC 9621(d)(4).

(5) All of the following hazardous wastes are not subject to this chapter:

(a) Waste generated by very small quantity generators of less than 100 kilograms (220 pounds) of non-acute hazardous waste or less than one kilogram (2.2 pounds) of acute hazardous waste per month, as defined in s. NR 662.220.

(b) Waste pesticides that a farmer disposes of pursuant to s. NR 662.070.

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

(d) De minimis losses of characteristic wastes to wastewaters are not considered to be prohibited wastes and are defined as losses from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials). The following are also considered to be de minimus losses: 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 % 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.

(6) Universal waste handlers and universal waste transporters, as defined in s. NR 660.10, are exempt from ss. NR 668.07 and 668.50 for all of the following hazardous wastes.

(a) Batteries as described in s. NR 673.02.

(b) Pesticides as described in s. NR 673.03.

(c) Mercury-containing equipment as described in s. NR 673.04.

(d) Lamps as described in s. NR 673.05.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. (6) (c) Register July 2017 No. 739, eff. 8-1-17.

NR 668.02 Definitions applicable in this chapter.

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

(1) “Halogenated organic compounds” or “HOCs” means those compounds having a carbon–halogen bond which are listed under ch. NR 668 Appendix III.

(2) “Hazardous constituent” or “hazardous constituents” means those constituents listed in ch. NR 661 Appendix VIII.

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

(4) “Nonwastewaters” means wastes that do not meet the criteria for wastewaters in s. NR 668.02 (6).

(5) “Polychlorinated biphenyls” or “PCBs” means halogenated organic compounds defined in accordance with 40 CFR 761.3.

(6) “Wastewaters” means wastes that contain less than one % by weight total organic carbon (TOC) and less than one% by weight total suspended solids (TSS).

(7) “Debris” means solid material exceeding a 60 mm particle size that is intended for disposal and that is a manufactured object; or plant or animal matter; or natural geologic material. However, the following materials are not debris: any material for which a specific treatment standard is provided in subch. D, namely lead acid batteries, cadmium batteries, and radioactive lead solids; process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by s. NR 668.45 and other material is regulated as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

(8) “Hazardous debris” means debris that contains a hazardous waste listed in subch. D of ch. NR 661, or that exhibits a characteristic of hazardous waste identified in subch. C of ch. NR 661. Any deliberate mixing of prohibited hazardous waste with debris that changes its treatment classification, for example, from waste to hazardous debris, is not allowed under the dilution prohibition in s. NR 668.03.

(9) “Underlying hazardous constituent” means any constituent listed in s. NR 668.48, Table UTS—Universal Treatment Standards, except fluoride, selenium, sulfides, vanadium, and zinc, which can reasonably be expected to be present at the point of generation of the hazardous waste at a concentration above the constituent–specific UTS treatment standards.

(10) “Inorganic metal–bearing waste” means waste for which EPA has established treatment standards for metal hazardous constituents, and which does not otherwise contain significant organic or cyanide content as described in s. NR 668.03 (3) (a), and is specifically listed in ch. NR 668 Appendix XI.

(11) “Soil” means unconsolidated earth material composing the superficial geologic strata (material overlying bedrock), consisting of clay, silt, sand, or gravel size particles as classified by the U.S. natural resources conservation service, or a mixture of such materials with liquids, sludges or solids which is inseparable by simple mechanical removal processes and is made up primarily of soil by volume based on visual inspection. Any deliberate mixing of prohibited hazardous waste with soil that changes its treatment classification, for example, from waste to contaminated soil, is not allowed under the dilution prohibition in s. NR 668.03.

History: CR 05–032: cr. Register July 2006 No. 607, eff. 8–1–06.

NR 668.03 Dilution prohibited as a substitute for treatment. (1) Except as provided in sub. (2), no generator, transporter, handler, or owner or operator of a treatment, storage, or disposal facility may 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 subch. D, to cir-

cumvent the effective date of a prohibition in subch. C, to otherwise avoid a prohibition in subch. C, or to circumvent a land disposal prohibition imposed by 42 USC 6924.

(2) Dilution of wastes that are hazardous only because they exhibit a characteristic in treatment systems which include land–based units which treat wastes subsequently discharged to a water of the State pursuant to a permit issued under section s. 283.31, Stats., or which treat wastes in a CWA–equivalent treatment system, or which treat wastes for the purposes of pretreatment requirements under ss. 283.11 and 283.21, Stats., is not impermissible dilution for purposes of this section unless a method other than DEACT has been specified in s. NR 668.40 as the treatment standard, or unless the waste is a D003 reactive cyanide wastewater or nonwastewater.

(3) Combustion of the hazardous waste codes listed in ch. NR 668 Appendix XI is prohibited, unless the waste, at the point of generation, or after any bona fide treatment such as cyanide destruction prior to combustion, complies with one or more of the criteria in pars. (a) to (f), and is not otherwise specifically prohibited from combustion:

(a) The waste contains hazardous organic constituents or cyanide at levels exceeding the constituent–specific treatment standard found in s. NR 668.48.

(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, for example, 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 Wisconsin requirements necessitating reduction of organics, including biological agents.

(f) The waste contains greater than one% total organic carbon (TOC).

(4) Persons may not 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 all of the following:

(a) D008 wastes which exhibit a characteristic due to the presence of lead.

(b) All characteristic wastes containing lead as an underlying hazardous constituent.

(c) Listed wastes containing lead as a regulated constituent.

(d) Hazardous media containing any of the lead–containing wastes in this subsection.

History: CR 05–032: cr. Register July 2006 No. 607, eff. 8–1–06.

NR 668.04 Treatment surface impoundment exemption. (1) Wastes which are otherwise prohibited from land disposal under this chapter, may be treated in a surface impoundment or series of impoundments if all of the following conditions are met:

(a) Treatment of the wastes occurs in the impoundments.

(b) All of the following conditions are met:

1. Sampling and testing. For wastes with treatment standards in subch. D of ch. NR 668 or prohibition levels in subch. C, or both, or treatment standards in 42 USC 6924(d), the residues from treatment are analyzed, as specified in s. NR 668.07 or 668.32, to determine if they meet the applicable treatment standards or where no treatment standards have been established for the waste, the applicable prohibition levels. The sampling method, specified in the waste analysis plan under s. NR 664.0013 or 665.0013, shall be designed such that representative samples of the sludge and the supernatant are tested separately rather than mixed to form homogeneous samples.

2. Removal. All of the following treatment residues, including any liquid waste, shall be removed at least annually: residues

which do not meet the treatment standards promulgated under subch. D; residues which do not meet the prohibition levels established under subch. C or imposed by statute, where no treatment standards have been established; residues from the treatment of wastes prohibited from land disposal under subch. C, where no treatment standards have been established and no prohibition levels apply; or residues from managing listed wastes which are not delisted under 40 CFR 260.22. If the volume of liquid flowing through the impoundment or series of impoundments annually is greater than the volume of the impoundment or impoundments, this flow-through constitutes removal of the supernatant for the purpose of this requirement.

3. Subsequent management. Treatment residues may not be placed in any other surface impoundment for subsequent management.

4. Recordkeeping. Sampling and testing and recordkeeping provisions of ss. NR 664.0013 and 665.0013 apply.

(c) The impoundment meets the design requirements of s. NR 664.0221 (3) or 665.0221 (1), regardless that the unit may not be new, expanded, or a replacement, and the impoundment is in compliance with applicable groundwater monitoring requirements of ch. NR 664 unless one of the following conditions are met:

1. The surface impoundment is exempted pursuant to s. NR 664.0221 (4) or (5), or pursuant to s. NR 665.0221 (3) or (4).

2. Upon application by the owner or operator, the department, after notice and an opportunity to comment, grants a waiver of the design requirements on the basis that the surface impoundment meets all of the following conditions:

a. The surface impoundment has at least one liner, and there is no evidence that the liner is leaking.

b. The surface impoundment is located more than one-quarter mile from an underground source of drinking water.

c. The surface impoundment is in compliance with generally applicable groundwater monitoring requirements for facilities with licenses.

3. Upon application by the owner or operator, the department, after notice and an opportunity to comment, grants a modification to the design requirements on the basis of a demonstration that the surface impoundment is located, designed and operated so as to assure that there will be no migration of any hazardous constituent into groundwater or surface water at any future time.

(d) The owner or operator submits to the department a written certification that the requirements of par. (c) have been met. The following certification is required:

I certify under penalty of law that the requirements of s. NR 668.04 (1) (c) have been met for all surface impoundments being used to treat restricted wastes. I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

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

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06.

NR 668.05 Procedures for case-by-case extensions to an effective date. (1) Any person who generates, treats, stores, or disposes of a hazardous waste may submit an application under 40 CFR 268.5, to the EPA administrator for an extension to the effective date of any applicable restriction established under subch. C of ch. NR 668. The EPA administrator retains the authority to implement all requirements of 40 CFR 268.5.

(2) An extension granted by the EPA administrator 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.

(3) Whenever the EPA administrator establishes an extension to an effective date under 40 CFR 268.5, during the period for which the extension is in effect all of the following conditions apply:

(a) The hazardous waste covered by the extension is exempt from storage restrictions under s. NR 668.50 (1).

(b) The hazardous waste covered by the extension may be disposed in a landfill or surface impoundment, regardless of whether the unit is existing, new, or a replacement or lateral expansion, if the unit complies with all of the following technical requirements:

1. The landfill, if under an interim license, complies with the requirements of subch. F of ch. NR 665 and s. NR 665.0301 (1), (3), and (4).

2. The landfill, if licensed, complies with the requirements of subch. F of ch. NR 664 and s. NR 664.0301 (3), (4) and (5).

3. The surface impoundment, if under an interim license, complies with the requirements of subch. F of ch. NR 665 and s. NR 665.0221 (1), (3), and (4), and 42 USC 6925(j)(1).

4. The surface impoundment, if licensed, complies with the requirements of subch. F of ch. NR 664 and s. NR 664.0221 (3), (4), and (5).

5. The surface impoundment, if newly subject to 42 USC 6925(j)(1) due to the promulgation of additional listings or characteristics for the identification of hazardous waste, complies with the requirements of subch. F of ch. NR 665 within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and complies with the requirements of s. NR 665.0221 (1), (3), and (4) within 48 months after the promulgation of additional listings or characteristics of hazardous waste. If a national capacity variance is granted, during the period the variance is in effect, the surface impoundment, if newly subject to 42 USC 6925(j)(1) due to the promulgation of additional listings or characteristics of hazardous waste, complies with the requirements of subch. F of ch. NR 665 within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of s. NR 665.0221 (1), (3) and (4) within 48 months after the promulgation of additional listings or characteristics of hazardous waste.

6. The landfill, if disposing of containerized liquid hazardous wastes containing PCBs at concentrations greater than or equal to 50 ppm but less than 500 ppm, also complies with 40 CFR 761.75 and chs. NR 664 and 665.

(4) Pending a decision by the EPA administrator on the application, the applicant is required to comply with all restrictions on land disposal under this chapter once the effective date for the waste has been reached.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. (3) (b) 6. Register July 2017 No. 739, eff. 8-1-17.

NR 668.06 Petitions to allow land disposal of a waste prohibited under subch. C. (1) Any person seeking an exemption from a prohibition under subch. C of ch. NR 668 for the disposal of a restricted hazardous waste in a particular unit or units shall submit a petition under 40 CFR 268.6 to the EPA administrator demonstrating, to a reasonable degree of certainty, that there will be no migration of hazardous constituents from the disposal unit or injection zone for as long as the wastes remain hazardous. The EPA administrator retains the authority to implement all requirements of 40 CFR 268.6.

(2) Prior to the EPA administrator's decision, the applicant shall comply with all restrictions on land disposal under this chapter once the effective date for the waste has been reached.

(3) The petition granted by the EPA administrator does not relieve the petitioner of the petitioner's responsibilities in the management of hazardous waste under chs. NR 660 to 670.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06.

NR 668.07 Testing, tracking and recordkeeping requirements for generators, treaters and disposal

facilities. (1) Generators shall comply with all of the following requirements:

(a) A generator of hazardous waste shall determine if the hazardous waste shall be treated before it can be land disposed. This determination shall be done by determining if the hazardous waste meets the treatment standards in s. NR 668.40, 668.45, or 668.49. This determination shall be made by testing the waste or using knowledge of the waste. If the generator tests the waste, testing should 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 SW-846, incorporated by reference in s. NR 660.11, depending on whether the treatment standard for the waste is expressed as a total concentration or a concentration of hazardous constituent in the waste's extract. As an alternative to the generator determining if the hazardous waste is required to be treated before it can be land disposed, the generator shall send the waste to a RCRA licensed or permitted hazardous waste treatment facility, where the waste treatment facility shall comply with the requirements of sub. (2) and s. NR 664.0013. In addition, some hazardous wastes shall 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 s. NR 668.40 and are described in detail in s. NR 668.42, Table 1. It is not necessary to test hazardous waste, or soil contaminated by hazardous waste, which is treated under ss. NR 668.40 and 668.42, Table 1, unless the waste or soil is in a waste mixture, in which case the other wastes in the mixture with concentration level treatment standards shall be tested. If a generator is managing a waste or soil contaminated with a waste, that displays a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity, the generator shall comply with the special requirements of s. NR 668.09 in addition to any applicable requirements in this section.

(b) If the waste or contaminated soil does not meet the applicable treatment standards or if the generator chooses not to make the determination of whether the waste is required to be treated, the generator shall send a one-time written notice to each treatment or storage facility receiving the waste with the initial waste shipment, and shall place a copy in the generator's file. The notice shall include the information in column "668.07 (1) (b)" of the Generator Paperwork Requirements Table in par. (d). Alternatively, if the generator chooses not to make the determination of whether the waste is required to be treated, the notification shall include the EPA Hazardous Waste Numbers and Manifest Number of the first shipment and shall state "This hazardous waste may or may not be subject to the LDR treatment standards. The treat-

ment facility shall make the determination." No further notification is necessary until the waste or facility change, in which case a new notification shall be sent and a copy placed in the generator's file.

(c) If the waste or contaminated soil meets the treatment standard at the original point of generation, then generators shall meet all of the following conditions:

1. The generator shall send a one-time written notice to each treatment, storage, or disposal facility receiving the waste with the initial waste shipment, and place a copy in the generator's file. The notice shall include the information in column "668.07 (1) (c)" of the Generator Paperwork Requirements Table in par. (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 subch. D of ch. NR 668 [or 40 CFR 268]. 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. If the generator ships contaminated soil, then with the initial waste shipment, the generator shall send a one-time written notice to each treatment, storage or disposal facility receiving the contaminated soil and place a copy in the generator's file. The notice shall include the information in column "668.07 (1) (c)" of the Generator Paperwork Requirements Table in par. (d).

3. If the waste changes, the generator shall send a new notice and certification to the receiving facility, and place a copy in the generator's file. Generators of hazardous debris excluded from the definition of hazardous waste under s. NR 661.03 (6) are not subject to these requirements.

(d) If the generator's waste or contaminated soil is not required to meet treatment standards before it is land disposed because the waste or soil qualifies for an exemption, including but not limited to case-by-case extensions under 40 CFR 268.5, disposal in a non-migration unit under 40 CFR 268.6, or a national capacity variance or case-by-case capacity variance under subch. C, 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 "s. NR 668.07 (1) (d)" of the Generator Paperwork Requirements Table in this paragraph. If the waste changes, the generator shall send a new notice to the receiving facility, and place a copy in the generator's file.

Generator Paperwork Requirements Table

| Required information | s. NR 668.07 (1) (b) | s. NR 668.07 (1) (c) | s. NR 668.07 (1) (d) | s. NR 668.07 (1) (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 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 ss. NR 668.02 (4) and (6)) 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 s. NR 668.45: the contaminants subject to treatment, as described in s. NR 668.45 (2); and an indication that these contaminants are being treated to comply with s. NR 668.45 | ✓ | | ✓ | |

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|---|---|---|--|---|
| 8. For contaminated soil subject to LDRs as provided in s. NR 668.49 (1), the constituents subject to treatment as described in s. NR 668.49 (4), 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 s. NR 668.49 (3) or the universal treatment standards | ✓ | ✓ | | |
| 9. A certification is needed (see applicable section for exact wording) | | ✓ | | ✓ |

(e) If a generator is managing and treating prohibited waste or contaminated soil in tanks, containers or containment buildings regulated under s. NR 662.034 to meet applicable LDR treatment standards found at s. NR 668.40, the generator shall develop and follow a written waste analysis plan which describes the procedures they will carry out to comply with the treatment standards. Generators treating hazardous debris under the alternative treatment standards of s. NR 668.45, Table 1, however, are not subject to the waste analysis requirements in this section. The plan shall be kept on site in the generator's records, and all of the following requirements shall be met:

1. The waste analysis plan shall be based on a detailed chemical and physical analysis of a representative sample of the prohibited waste being treated, and contain all information necessary to treat the waste 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 this subsection shall comply with the notification requirements of par. (c).

(f) If a generator determines that the waste or contaminated soil is restricted based solely on the generator's 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 SW-846, incorporated by reference in s. NR 660.11, then all waste analysis data shall be retained on-site in the generator's files.

(g) If a generator determines that the generator is managing a prohibited waste that is excluded from the definition of hazardous or solid waste or is not regulated under ch. 291, Stats., and chs. NR 660 to 673 pursuant to ss. NR 661.02 to 661.06 subsequent to the point of generation, including deactivated characteristic hazardous wastes managed in wastewater treatment systems subject to 33 USC 1342 as specified at s. NR 661.04 (1) (b) or that are CWA-equivalent, the generator shall place a one-time notice describing the generation, subsequent exclusion from the definition of hazardous or solid waste or exemption from ch. 291, Stats., and chs. NR 660 to 673 regulation, 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 this section for at least 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 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 department. The requirements of this subsection apply to solid wastes even when the hazardous characteristic is removed prior to disposal, or when the waste is excluded from the definition of hazardous or solid waste under ss. NR 661.02 to 661.06, or exempted from ch. 291, Stats., and chs. NR 660 to 673, 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 s. NR 668.42 (3), then the generator shall comply with all of the following:

1. With the initial shipment of waste to a treatment facility, the generator shall submit a notice and place a copy in the generator's

file. The notice shall provide the information in column "668.07 (1) (i)" in the Generator Paperwork Requirements Table of par. (d), and shall include 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 and that the lab pack contains only wastes that have not been excluded under ch. NR 668 Appendix IV and that this lab pack will be sent to a combustion facility in compliance with the alternative treatment standards for lab packs at s. NR 668.42 (3) [or 40 CFR 268.42(c)]. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine or imprisonment.

2. No further notification is necessary until the time that 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 to D008, and D010 to D043), the generator does not need to determine the underlying hazardous constituents, as defined in s. NR 668.02 (9).

4. The generator shall also comply with the requirements in pars. (f) and (g).

(j) Small quantity generators with tolling agreements pursuant to s. NR 662.191 (1) shall comply with the applicable notification and certification requirements of this subsection for the initial shipment of the waste subject to the agreement. Generators shall retain on-site a copy of the notification and certification, together with the tolling agreement, for at least 3 years after termination or expiration of the agreement. The three-year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the department.

(2) Treatment facilities shall test their wastes according to the frequency specified in their waste analysis plans as required by s. NR 664.0013 (for licensed TSDs) or s. NR 665.0013 (for interim license facilities). Testing shall be performed as provided in pars. (a) to (c).

(a) 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 SW-846, incorporated by reference in s. NR 660.11) to assure that the treatment residues extract meet the applicable treatment standards.

(b) 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.

(c) 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.

1. 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.

2. The one-time notice shall include all of the following requirements:

Treatment Facility Paperwork Requirements Table

| Required information | s. NR 668.07 (2) |
|--|------------------|
| 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 ss. NR 668.02 (4) and (6)) 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 s. NR 668.49 (1), the constituents subject to treatment as described in s. NR 668.49 (4) and the following statement: “This contaminated soil [does/does not] exhibit a characteristic of hazardous waste and [is subject to/complies with] the soil treatment standards as provided by s. NR 668.49 (3).” | ✓ |
| 6. A certification is needed (see applicable section for exact wording) | ✓ |

(d) 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 s. NR 668.40 [or 40 CFR 268.40] without impermissible dilution of the prohibited waste. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

A certification is also necessary for contaminated soil and it 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 and believe that it has been maintained and operated properly so as to comply with treatment standards specified in s. NR 668.49 [or 40 CFR 268.49] without impermissible dilution of the prohibited wastes. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

1. A copy of the certification 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 treatment facility’s on–site file.

2. Debris excluded from the definition of hazardous waste under s. NR 661.03 (6) (i.e., debris treated by an extraction or destruction technology provided by s. NR 668.45, Table 1, and debris that the department has determined does not contain hazardous waste), is subject to the notification and certification requirements of sub. (4) rather than the certification requirements of this subsection.

3. 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 s. NR 668.40 (4), then 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 s. NR 668.42 [or 40 CFR 268.42], Table 1. 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.

4. For characteristic wastes that are subject to the treatment standards in s. NR 668.40, other than those expressed as a method of treatment, or s. NR 668.49, and that contain underlying hazardous constituents as defined in s. NR 668.02 (9); if these wastes are treated on–site to remove the hazardous characteristic; and are then sent off–site for treatment of underlying hazardous constituents, the certification shall state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of s. NR 668.40 or 668.49 [or 40 CFR 268.40 or 268.49] to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

5. For characteristic wastes that contain underlying hazardous constituents as defined in s. NR 668.02 (9) that are treated on–site to remove the hazardous characteristic, and to treat underlying hazardous constituents to meet the universal treatment standards in s. NR 668.48, the certification shall state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of s. NR 668.40 [40 CFR 268.40] to remove the hazardous characteristic and that underlying hazardous constituents, as defined in s. NR 668.02 (9) have been treated on–site to meet the universal treatment standards under s. NR 668.48 [or 40 CFR 268.48]. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(e) 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 this section.

(f) Where the wastes are recyclable materials used in a manner constituting disposal subject to s. NR 666.020 (2) regarding treatment standards and prohibition levels, the owner or operator of a treatment facility (for instance, the recycler) is not required to notify the receiving facility, pursuant to par. (c). With each shipment of wastes the owner or operator of the recycling facility shall, for the initial shipment of waste, prepare a one–time certification described in par. (d), and a one–time notice which includes the information in par. (c), except the manifest number. The certification and notification shall be placed in the facility’s on–site files. The recycling facility shall also keep records of the name and location of each entity receiving the hazardous waste–derived product.

(3) Except where the owner or operator is disposing of any waste that is a recyclable material used in a manner constituting disposal pursuant to s. NR 666.020 (2), the owner or operator of

any land disposal facility disposing any waste subject to restrictions under this chapter shall comply with all of the following:

(a) Have copies of the notice and certifications specified in subs. (1) and (2).

(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 SW-846, incorporated by reference in s. NR 660.11), to assure that the wastes or treatment residues are in compliance with the applicable treatment standards set forth in subch. D. This testing shall be performed according to the frequency specified in the facility’s waste analysis plan as required by s. NR 664.0013 or 665.0013.

(4) Generators or treaters who claim that hazardous debris is excluded from the definition of hazardous waste under s. NR 661.03 (6) (i.e., debris treated by an extraction or destruction technology provided by s. NR 668.45, Table 1, and debris that the department has determined does not contain hazardous waste) are subject to all of the following notification and certification requirements:

(a) A one-time notification, including the following information, shall be submitted to the department:

1. The name and address of the approved facility for solid waste disposal which is receiving the treated debris.

2. A description of the hazardous debris as initially generated, including the applicable EPA hazardous waste number or numbers.

3. For debris excluded under s. NR 661.03 (6) (a), the technology from s. NR 668.45, Table 1, 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 s. NR 661.02 (5) (a), if a different type of debris is treated or if a different technology is used to treat the debris.

(c) For debris excluded under s. NR 661.03 (6) (a), the owner or operator of the treatment facility shall document and certify compliance with the treatment standards of s. NR 668.45, Table 1, by meeting all of the following criteria:

1. The owner or operator of the treatment facility shall keep records of all inspections, evaluations and analyses of treated debris that are made to determine compliance with the treatment standards.

2. The owner or operator of the treatment facility shall keep records of any data or information the treatment facility obtains during treatment of the debris that identifies key operating parameters of the treatment unit.

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 s. NR 668.45. I am aware that there are significant penalties for making a false certification, including the possibility of fine and imprisonment.”

(5) If the department determines that a contaminated soil subject to LDRs as provided in s. NR 668.49 (1) no longer contains a listed hazardous waste, or if a generator or treater determines that a contaminated soil subject to LDRs as provided in s. NR 668.49 (1) no longer exhibits a characteristic of hazardous waste, then the generator or treater shall meet all of the following conditions:

(a) Prepare a one-time only documentation of these determinations including all supporting information.

(b) Maintain that information in the facility files and other records for a minimum of 3 years.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. (1) (a), (b), (c) 1., (d), (2) (f) Register July 2017 No. 739, eff. 8-1-17; correction in (1) (a) made under s. 35.17, Stats., Register July 2017 No. 739.

NR 668.09 Special rules regarding wastes that exhibit a characteristic. (1) The initial generator of a solid waste shall determine each EPA hazardous waste number (waste code) applicable to the waste to determine the applicable treatment standards under subch. D. This determination may be made concurrently with the hazardous waste determination required in s. NR 662.011. For purposes of this chapter, the waste will carry the waste code for any applicable listed waste (subch. D of ch. NR 661). In addition, where the waste exhibits a characteristic, the waste will carry one or more of the characteristic waste codes (subch. C of ch. NR 661), except when the treatment standard for the listed waste operates in lieu of the treatment standard for the characteristic waste, as specified in sub. (2). If the generator determines that their waste displays a hazardous characteristic, and is not D001 nonwastewaters treated by CMBST, RORGS, OR POLYM under s. NR 668.42, Table 1, then the generator shall determine the underlying hazardous constituents, as defined by s. NR 668.02 (9), in the characteristic waste.

(2) Where a prohibited waste is both listed under subch. D of ch. NR 661 and exhibits a characteristic under subch. C of ch. NR 661, the treatment standard for the waste code listed in subch. D of ch. NR 661 will operate in lieu of the standard for the waste code under subch. C of ch. NR 661, if 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.

(3) In addition to any applicable standards determined from the initial point of generation, no prohibited waste that exhibits a characteristic under subch. C of ch. NR 661 may be land disposed unless the waste complies with the treatment standards under subch. D.

(4) Wastes that exhibit a characteristic are also subject to s. NR 668.07, 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 on-site files. 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 approved facility for solid waste disposal receiving the waste changes.

(a) The notification shall include all of the following information:

1. Name and address of the approved facility for solid waste disposal which is receiving the waste shipment.

2. A description of the waste as initially generated, including the applicable EPA hazardous waste code or codes, treatability group or groups, and underlying hazardous constituents, as defined in s. NR 668.02 (9), 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.

(b) The certification shall be signed by an authorized representative and shall include the language in s. NR 668.07 (2) (d). If treatment removes the characteristic but does not meet standards applicable to underlying hazardous constituents, then the certification in s. NR 668.07 (2) (d) 4. applies.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. (1), (4) (intro.), Register July 2017 No. 739, eff. 8-1-17.

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

NR 668.14 Surface impoundment exemptions.

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

(2) Wastes which are newly identified or listed under 42 USC 6921 after November 8, 1984, and stored in a surface impoundment that is newly subject to ch. 291, Stats., and chs. NR 660 to 673 as a result of the additional identification or listing, may continue to be stored in the surface impoundment for 48 months after the promulgation of the additional listing or characteristic, not withstanding that the waste is otherwise prohibited from land disposal, if the surface impoundment is in compliance with the requirements of subch. F of ch. NR 665 within 12 months after promulgation of the new listing or characteristic.

(3) Wastes which are newly identified or listed under 42 USC 6921 after November 8, 1984, and treated in a surface impoundment that is newly subject to ch. 291, Stats., and chs. NR 660 to 673 as a result of the additional identification or listing, may continue to be treated in that surface impoundment, not withstanding that the waste is otherwise prohibited from land disposal, if the surface impoundment is in compliance with subch. F of ch. NR 665 within 12 months after the promulgation of the new listing or characteristic. In addition, if the surface impoundment continues to treat hazardous waste after 48 months from promulgation of the additional listing or characteristic, it must then be in compliance with s. NR 668.04.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06.

Subchapter C — Prohibitions on Land Disposal

NR 668.20 Waste specific prohibitions – Dyes or pigments production wastes. (1) Effective August 23, 2005, the waste specified in ch. NR 661 and 40 CFR part 261 as hazardous waste number K181, and soil and debris contaminated with this waste, radioactive wastes mixed with this waste and soil and debris contaminated with radioactive wastes mixed with this waste are prohibited from land disposal.

(2) The requirements of sub. (1) do not apply if:

(a) The wastes meet the applicable treatment standards specified in subch. D of ch. NR 668.

(b) The facility has been granted an exemption from a prohibition pursuant to a petition under s. NR 668.06, with respect to those wastes and units covered by the petition.

(c) The wastes meet the applicable treatment standards established pursuant to a petition granted under s. NR 668.44.

(d) Hazardous debris has met the treatment standards in s. NR 668.40 or the alternative treatment standards in s. NR 668.45.

(e) The facility has been granted an extension to the effective date of a prohibition pursuant to s. NR 668.05, with respect to these wastes covered by the extension.

(3) To determine whether a hazardous waste identified in this subsection exceeds the applicable treatment standards specified in s. NR 668.40, 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 of the waste, or the generator may use knowledge of the waste. If the waste contains regulated constituents in excess of the applicable subch. D of ch. NR 668 levels, the waste is prohibited from land disposal, and all requirements of ch. NR 668 are applicable, except as otherwise specified.

History: CR 16-007: cr. Register July 2017 No. 739, eff. 8-1-17; correction in (2) (a) to (e), (3) made under s. 35.17, Stats., Register July 2017 No. 739.

NR 668.30 Waste specific prohibitions — wood preserving wastes. (1) Effective August 11, 1997, the wastes specified in ch. NR 661 as EPA Hazardous Waste numbers F032, F034, and F035 are prohibited from land disposal.

(2) 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.

(3) Between May 12, 1997 and May 12, 1999, soil and debris contaminated with F032, F034, F035; and radioactive waste mixed with F032, F034, and F035 may be disposed in a landfill or surface impoundment only if the unit is in compliance with the requirements specified in 40 CFR 268.5(h)(2).

(4) The requirements of sub. (1) and (2) do not apply if any of the following conditions are met:

(a) The wastes meet the applicable treatment standards specified in subch. D.

(b) Persons have been granted an exemption from a prohibition pursuant to a petition under 40 CFR 268.6, with respect to those wastes and units covered by the petition.

(c) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under 40 CFR 268.44(a) to (g) or s. NR 668.44 (8) to (13).

(d) Persons have been granted an extension to the effective date of a prohibition pursuant to 40 CFR 268.5, with respect to those wastes covered by the extension.

(5) To determine whether a hazardous waste identified in this chapter exceeds the applicable treatment standards specified in s. NR 668.40, 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 s. NR 668.48, the waste is prohibited from land disposal, and all requirements of ch. NR 668 are applicable, except as otherwise specified.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. (4) (c) Register July 2017 No. 739, eff. 8-1-17.

NR 668.31 Waste specific prohibitions — dioxin-containing wastes. (1) Effective November 8, 1988, the dioxin-containing wastes specified in s. NR 661.31 as EPA hazardous waste numbers F020, F021, F022, F023, F026, F027, and F028, are prohibited from land disposal, unless the F020 to F023 and F026 to F028 dioxin-containing waste is contaminated soil and debris resulting from a response action taken under 42 USC 9604 or 9606 or a corrective action taken under ch. 292, Stats.

(2) Effective November 8, 1990, the F020-F023 and F026-F028 dioxin-containing wastes listed in sub. (1) are prohibited from land disposal.

(3) Between November 8, 1988, and November 8, 1990, wastes included in sub. (1) may be disposed in a landfill or surface impoundment only if the unit complies with 40 CFR 268.5(h)(2) and all other applicable requirements of chs. NR 664 and 665.

(4) The requirements of subs. (1) and (2) do not apply if any of the following conditions are met:

(a) The wastes meet the standards of subch. D.

(b) Persons have been granted an exemption from a prohibition pursuant to a petition under 40 CFR 268.6, with respect to those wastes and units covered by the petition.

(c) Persons have been granted an extension to the effective date of a prohibition pursuant to 40 CFR 268.5, with respect to those wastes covered by the extension.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06.

NR 668.32 Waste specific prohibitions — soils exhibiting the toxicity characteristic for metals and containing PCBs. (1) Effective December 26, 2000, any volumes of soil exhibiting the toxicity characteristic solely because of the presence of metals (D004 to D011) and containing PCBs, are prohibited from land disposal.

(2) The requirements of sub. (1) do not apply if any of the following conditions are met:

(a) The wastes contain halogenated organic compounds in total concentration less than 1,000 mg/kg and meet the treatment

standards specified in subch. D for EPA hazardous waste numbers D004 to D011, as applicable.

(b) The wastes contain halogenated organic compounds in total concentration less than 1,000 mg/kg and meet the alternative treatment standards specified in s. NR 668.49 for contaminated soil.

(c) Persons have been granted an exemption from a prohibition pursuant to a petition under 40 CFR 268.6, with respect to those wastes and units covered by the petition.

(d) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under 40 CFR 268.44(a) to (g) or s. NR 668.44 (8) to (13).

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. (2) (d) Register July 2017 No. 739, eff. 8-1-17.

NR 668.33 Waste specific prohibitions — chlorinated aliphatic wastes. (1) Effective May 8, 2001, the wastes specified in ch. NR 661 as EPA hazardous wastes numbers K174 and K175, soil and debris contaminated with these wastes, radioactive wastes mixed with these wastes, and soil and debris contaminated with radioactive wastes mixed with these wastes are prohibited from land disposal.

(2) The requirements of sub. (1) do not apply if any of the following conditions are met:

(a) The wastes meet the applicable treatment standards specified in subch. D.

(b) Persons have been granted an exemption from a prohibition pursuant to a petition under 40 CFR 268.6, with respect to those wastes and units covered by the petition.

(c) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under 40 CFR 268.44(a) to (g) or s. NR 668.44 (8) to (13).

(d) Hazardous debris has met the treatment standards in s. NR 668.40 or the alternative treatment standards in s. NR 668.45.

(e) Persons have been granted an extension to the effective date of a prohibition pursuant to 40 CFR 268.5, with respect to these wastes covered by the extension.

(3) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in s. NR 668.40, 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 regulated constituents in excess of the applicable levels of subch. D, the waste is prohibited from land disposal, and all requirements of ch. NR 668 are applicable, except as otherwise specified.

(4) Disposal of K175 wastes which comply with all applicable s. NR 668.40 treatment standards shall also be macroencapsulated in accordance with s. NR 668.45, Table 1 unless one of the following conditions is met:

(a) The waste is placed in a hazardous waste monofill which meets the requirements of ch. 291, Stats., and chs. NR 660 to 673. The monofill shall contain only K175 wastes that meet all applicable s. NR 668.40 treatment standards.

(b) The waste is placed in a dedicated hazardous waste landfill cell which meets the requirements of ch. 291, Stats., and chs. NR 660 to 673 and in which all other wastes being co-disposed are at pH=6.0.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. (2) (c) Register July 2017 No. 739, eff. 8-1-17.

NR 668.34 Waste specific prohibitions — toxicity characteristic metal wastes. (1) Effective August 24, 1998, the newly identified wastes specified in ch. NR 661 as EPA hazardous waste numbers D004 to D011 (i.e. wastes, soil, or debris identified as hazardous by the toxic characteristic leaching procedure but not the extraction procedure), and waste, soil, or debris

from mineral processing operations that is identified as hazardous by the specifications at ch. NR 661 are prohibited from land disposal.

(2) Effective November 26, 1998, slag from secondary lead smelting which exhibits the toxicity characteristic due to the presence of one or more metals is prohibited from land disposal.

(3) Effective May 26, 2000, newly identified characteristic wastes from elemental phosphorus processing; radioactive wastes mixed with newly identified wastes specified in EPA hazardous waste numbers D004 to D011 (i.e., wastes, soil, or debris identified as hazardous by the toxic characteristic leaching procedure but not the extraction procedure); or mixed with newly identified characteristic mineral processing wastes, soil, or debris are prohibited from land disposal.

(4) Between May 26, 1998 and May 26, 2000, newly identified characteristic wastes from elemental phosphorus processing, radioactive waste mixed with D004 to D011 wastes that are newly identified (i.e., wastes, soil, or debris identified as hazardous by the toxic characteristic leaching procedure but not the extraction procedure), or mixed with newly identified characteristic mineral processing wastes, soil, or debris may be disposed in a landfill or surface impoundment only if the unit is in compliance with 40 CFR 268.5(h).

(5) The requirements of subs. (1) and (2) do not apply if:

(a) The wastes meet the applicable treatment standards specified in subch. D.

(b) EPA has granted an exemption from a prohibition pursuant to a petition under 40 CFR 268.6, with respect to those wastes and units covered by the petition.

(c) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under 40 CFR 268.44.

(d) EPA has granted an extension to the effective date of a prohibition pursuant to 40 CFR 268.5, with respect to these wastes covered by the extension.

(6) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in s. NR 668.40, the initial generator shall test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentration in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents (including underlying hazardous constituents in characteristic wastes) in excess of the applicable universal treatment standard levels of s. NR 668.48, then the waste is prohibited from land disposal, and all requirements of this chapter are applicable, except as otherwise specified.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06.

NR 668.35 Waste specific prohibitions — petroleum refining wastes. (1) Effective February 8, 1999, wastes specified in ch. NR 661 as EPA hazardous waste numbers K169, K170, K171, and K172, soils and debris contaminated with these wastes, radioactive wastes mixed with these wastes, and soils and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.

(2) The requirements of sub. (1) do not apply if any of the following conditions are met:

(a) The wastes meet the applicable treatment standards specified in subch. D.

(b) EPA has granted an exemption from a prohibition pursuant to a petition under 40 CFR 268.6, with respect to those wastes and units covered by the petition.

(c) The wastes meet the applicable treatment standards established pursuant to a petition granted under 40 CFR 268.44(a) to (g) or s. NR 668.44 (8) to (13).

(d) Hazardous debris have met treatment standards in s. NR 668.40 or the alternative treatment standards in s. NR 668.45.

(e) EPA has granted an extension to the effective date of a prohibition pursuant to 40 CFR 268.5, with respect to these wastes covered by the extension.

(3) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in s. NR 668.40, 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 s. NR 668.48, then the waste is prohibited from land disposal, and all requirements of this chapter are applicable, except as otherwise specified.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. (2) (c) Register July 2017 No. 739, eff. 8-1-17.

NR 668.36 Waste specific prohibitions — inorganic chemical wastes. (1) Effective May 20, 2002, the wastes specified in ch. NR 661 as EPA hazardous waste numbers K176, K177, and K178, and soil and debris contaminated with these wastes, radioactive wastes mixed with these wastes, and soil and debris contaminated with radioactive wastes mixed with these wastes are prohibited from land disposal.

(2) The requirements of sub. (1) do not apply if any of the following conditions are met:

(a) The wastes meet the applicable treatment standards specified in subch. D.

(b) EPA has granted an exemption from a prohibition pursuant to a petition under 40 CFR 268.6, with respect to those wastes and units covered by the petition.

(c) The wastes meet the applicable treatment standards established pursuant to a petition granted under 40 CFR 268.44(a) to (g) or s. NR 668.44 (8) to (13).

(d) Hazardous debris has met the treatment standards in s. NR 668.40 or the alternative treatment standards in s. NR 668.45.

(e) EPA has granted an extension to the effective date of a prohibition pursuant to 40 CFR 268.5, with respect to these wastes covered by the extension.

(3) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in s. NR 668.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains regulated constituents in excess of the applicable subch. D levels, the waste is prohibited from land disposal, and all requirements of this chapter are applicable, except as otherwise specified.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. (2) (c) Register July 2017 No. 739, eff. 8-1-17.

NR 668.37 Waste specific prohibitions — ignitable and corrosive characteristic wastes whose treatment standards were vacated. Effective August 9, 1993, wastes specified in s. NR 661.21 as D001, which are not in the high TOC ignitable liquids subcategory, and specified in s. NR 661.22 as D002, which are managed in systems other than those whose discharge is regulated under ch. 283, Stats., or in systems 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.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06.

NR 668.38 Waste specific prohibitions — newly identified organic toxicity characteristic wastes and

newly listed coke by-product and chlorotoluene production wastes. (1) Effective December 19, 1994, the wastes specified in s. NR 661.32 as EPA hazardous waste numbers K141, K142, K143, K144, K145, K147, K148, K149, K150, and K151 are prohibited from land disposal. In addition, debris contaminated with EPA hazardous waste numbers F037, F038, K107 to K112, K117, K118, K123 to K126, K131, K132, K136, U328, U353, U359, and soil and debris contaminated with D012 to D043, K141 to K145, and K147 to K151 are prohibited from land disposal. Wastes that are specified in s. NR 661.24, Table 1 as EPA hazardous waste numbers: D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043 that are not radioactive, or that are managed in systems other than those whose discharge is regulated under ch. 283, Stats., or that are zero dischargers that do not engage in CWA-equivalent treatment before ultimate land disposal are prohibited from land disposal.

(2) On September 19, 1996, radioactive wastes that are mixed with D018 to D043 that are managed in systems other than those whose discharge is regulated under ch. 283, Stats., 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 K 141 to K 145, and K147 to K151 are also prohibited from land disposal. In addition, soil and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.

(3) Between December 19, 1994 and September 19, 1996, the wastes included in sub. (2) may be disposed in a landfill or surface impoundment, only if the unit is in compliance with 40 CFR 268.5(h)(2).

(4) The requirements of subs. (1) to (3) do not apply if any of the following conditions are met:

(a) The wastes meet the applicable treatment standards specified in subch. D.

(b) EPA has granted an exemption from a prohibition pursuant to a petition under 40 CFR 268.6, with respect to those wastes and units covered by the petition.

(c) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under 40 CFR 268.44(a) to (g) or s. NR 668.44 (8) to (13).

(d) EPA has granted an extension to the effective date of a prohibition pursuant to 40 CFR 268.5, with respect to these wastes covered by the extension.

(5) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in s. NR 668.40, 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 subch. D levels, the waste is prohibited from land disposal, and all requirements of this chapter are applicable, except as otherwise specified.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. (4) (c) Register July 2017 No. 739, eff. 8-1-17.

NR 668.39 Waste specific prohibitions — spent aluminum potliners, reactive and carbamate wastes. (1) On July 8, 1996, the wastes specified in s. NR 661.32 as EPA Hazardous waste numbers K156 to K159, and K161; and in s. NR 661.33 as EPA hazardous waste numbers P127, P128, P185, P188 to P192, P194, P196 to P199, P201 to P205, U271, U278 to U280, U364, U367, U372, U373, U387, U389, U394, U395, U404, and U409 to U411 are prohibited from land disposal. In addition, soil

and debris contaminated with these wastes are prohibited from land disposal.

(2) On July 8, 1996, the wastes identified in s. NR 661.23 as D003 that are managed in systems other than those whose discharge is regulated under ch. 283, Stats., or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. This prohibition does not apply to unexploded ordnance and other explosive devices which have been the subject of an emergency response. (These D 003 wastes are prohibited unless they meet the treatment standard of DEACT before land disposal as described in s. NR 668.40).

(3) On September 21, 1998, the wastes specified in s. NR 661.32 as EPA hazardous waste number K088 are prohibited from land disposal. In addition, soil and debris contaminated with these wastes are prohibited from land disposal.

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

(5) Between July 8, 1996, and April 8, 1998, the wastes included in subs. (1), (3) and (4) may be disposed in a landfill or surface impoundment, only if the unit is in compliance with 40 CFR 268.5(h)(2).

(6) The requirements of subs. (1) to (4) do not apply if any of the following conditions are met:

(a) The wastes meet the applicable treatment standards specified in subch. D.

(b) EPA has granted an exemption from a prohibition pursuant to a petition under 40 CFR 268.6, with respect to those wastes and units covered by the petition.

(c) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under 40 CFR 268.44(a) to (g) or s. NR 668.44 (8) to (13).

(d) EPA has granted an extension to the effective date of a prohibition pursuant to 40 CFR 268.5, with respect to these wastes covered by the extension.

(7) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in s. NR 668.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable subch. D levels, the waste is prohibited from land disposal, and all requirements of this chapter are applicable, except as otherwise specified.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. (2), (6) (c) Register July 2017 No. 739, eff. 8-1-17.

Subchapter D — Treatment Standards

NR 668.40 Applicability of treatment standards.

(1) A prohibited waste identified in the table “Treatment Standards for Hazardous Wastes” in this section may be land disposed only if it meets the requirements found in the table. For each waste, the table identifies one of the following three 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 for that waste in the table under the heading “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 under the heading, “waste extract standards”.

(c) The waste shall be treated using the technology specified in the table under the heading “technology standard”, and

described in detail in s. NR 668.42, Table 1—Technology Codes and Description of Technology-Based Standards.

(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 SW-846, incorporated by reference in s. NR 660.11 shall be used to measure compliance. An exception is made for D004 and D008, for which either of two test methods may be used: Method 1311 or Method 1310B, the extraction procedure toxicity test. For wastes covered by a technology standard, the wastes may be land disposed after being treated using that specified technology or an equivalent treatment technology approved by the EPA Administrator under the procedures set forth in 40 CFR 268.42(b).

(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.

(4) Notwithstanding the prohibitions specified in sub. (1), treatment and disposal facilities may demonstrate and certify pursuant to s. NR 668.07 (2) (e) compliance with the treatment standards for organic constituents specified by a footnote in the table “Treatment Standards for Hazardous Wastes” in this section, provided all of 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 subch. O of ch. NR 664, 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 par. (a) to treat the organic constituents.

(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 this section by an order of magnitude.

(5) For characteristic wastes (D001 to D043) that are subject to treatment standards in the table “Treatment Standards for Hazardous Wastes,” and are not managed in a wastewater treatment system that is regulated under ch. 283, Stats., or that is CWA-equivalent, all underlying hazardous constituents as defined in s. NR 668.02 (9) must meet universal treatment standards, found in s. NR 668.48, Table Universal Treatment Standards, prior to land disposal as defined in s. NR 668.02 (3).

(6) The treatment standards for F001 to F005 nonwastewater constituents carbon disulfide, cyclohexanone, and methanol apply to wastes which contain only one, 2, or 3 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 SW-846, incorporated by reference in s. NR 660.11. If the waste contains any of these three constituents along with any of the other 25 constituents found in F001 to F005, then compliance with treatment standards for carbon disulfide, cyclohexanone, and methanol are not required.

(7) Between August 26, 1996 and March 4, 1999 the treatment standards for the wastes specified in s. NR 661.32 as EPA hazardous waste numbers K156 to K161 and in s. NR 661.33 as EPA hazardous waste numbers P127, P128, P185, P188 to P192, P194, P196 to P199, P201 to P205, U271, U277 to U280, U364 to U367, U372, U373, U375 to U379, U381 to U387, U389 to U396, U400 to U404, U407, and U409 to U411; and soil contaminated with these wastes; shall be satisfied by either meeting the constituent

concentrations presented in the table “Treatment Standards for Hazardous Wastes” in this section, or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST at s. NR 668.42, Table 1, for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN; chemical oxidation as defined by the technology code CHOXD; or combustion as defined as technology code CMBST at s. NR 668.42, Table 1, for wastewaters.

(8) If prohibited D004 to D011 mixed radioactive wastes and mixed radioactive listed wastes containing metal constituents, have been previously treated by stabilization to the treatment standards in effect at that time and put into storage afterwards, then it is not necessary to re-treat the waste to meet treatment standards in this section prior to land disposal.

(10) Effective September 4, 1998, the treatment standards for the wastes specified in s. NR 661.33 as EPA hazardous waste numbers P185, P191, P192, P197, U364, U394, and U395 shall be satisfied by either meeting the constituent concentrations presented in the table “Treatment Standards for Hazardous Wastes” in this section, or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST at s. NR 668.42, Table 1, for nonwastewaters; biodegradation as defined by the technology code BIODG; carbon adsorption as defined by the technology code CARBN; chemical oxidation as defined by the technology code CHOXD; or combustion as defined as technology code CMBST at s. NR 668.42, Table 1, for wastewaters.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. (2), (Table) Register July 2017 No. 739, eff. 8-1-17.

Section NR 668.40 – Treatment Standards for Hazardous Wastes

NA means not applicable.

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|--|--|----------------------------------|-------------------------|---|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as “mg/L TCLP”; or Technology Code ⁴ |
| D001 ⁹ | Ignitable Characteristic Wastes, except for the s. NR 661.21 (1) (a) High TOC Subcategory. | NA | NA | DEACT and meet s. NR 668.48 standards ⁸ ; or RORGS; or CMBST | DEACT and meet s. NR 668.48 standards ⁸ ; or RORGS; or CMBST |
| | High TOC Ignitable Characteristic Liquids Subcategory based on s. NR 661.21 (1) (a) – Greater than or equal to 10% total organic carbon. (Note: This subcategory consists of nonwastewaters only.) | NA | NA | NA | RORGS; CMBST; or POLYM |
| D002 ⁹ | Corrosive Characteristic Wastes. | NA | NA | DEACT and meet s. NR 668.48 standards ⁸ | DEACT and meet s. NR 668.48 standards ⁸ |
| D002, D004, D005, D006, D007, D008, D009, D010, D011 | Radioactive high level wastes generated during the reprocessing of fuel rods. (Note: This subcategory consists of nonwastewaters only.) | Corrosivity (pH) | NA | NA | HLVIT |
| | | Arsenic | 7440–38–2 | NA | HLVIT |
| | | Barium | 7440–39–3 | NA | HLVIT |
| | | Cadmium | 7440–43–9 | NA | HLVIT |
| | | Chromium (Total) | 7440–47–3 | NA | HLVIT |
| | | Lead | 7439–92–1 | NA | HLVIT |
| | | Mercury | 7439–97–6 | NA | HLVIT |
| | | Selenium | 7782–49–2 | NA | HLVIT |
| D003 ⁹ | Reactive Sulfides Subcategory based on s. NR 661.23 (1) (e). | NA | NA | DEACT | DEACT |
| | Explosives Subcategory based on s. NR 661.23 (1) (f), (g) and (h). | NA | NA | DEACT and meet s. NR 668.48 standards ⁸ | DEACT and meet s. NR 668.48 standards ⁸ |
| | Unexploded ordnance and other explosive devices which have been the subject of an emergency response. | NA | NA | DEACT | DEACT |
| | Other Reactives Subcategory based on s. NR 661.23 (1) (a). | NA | NA | DEACT and meet s. NR 668.48 standards ⁸ | DEACT and meet s. NR 668.48 standards ⁸ |
| | Water Reactive Subcategory based on s. NR 661.23 (1) (b), (c) and (d). (Note: This subcategory consists of nonwastewaters only.) | NA | NA | NA | DEACT and meet s. NR 668.48 standards ⁸ |
| | Reactive Cyanides Subcategory based on s. NR 661.23 (1) (e). | Cyanides (Total) ⁷ | 57–12–5 | Reserved | 590 |
| | | Cyanides (Amenable) ⁷ | 57–12–5 | 0.86 | 30 |
| D004 ⁹ | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for arsenic based on the toxicity characteristic leaching procedure (TCLP) in SW846 ¹³ . | Arsenic | 7440–38–2 | 1.4 and meet s. NR 668.48 standards ⁸ | 5.0 mg/L TCLP and meet s. NR 668.48 standards ⁸ |
| D005 ⁹ | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for barium based on the toxicity characteristic leaching procedure (TCLP) in SW846 ¹³ . | Barium | 7440–39–3 | 1.2 and meet s. NR 668.48 standards ⁸ | 21 mg/L TCLP and meet s. NR 668.48 standards ⁸ |
| D006 ⁹ | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for cadmium based on the toxicity characteristic leaching procedure (TCLP) in SW846 ¹³ . | Cadmium | 7440–43–9 | 0.69 and meet s. NR 668.48 standards ⁸ | 0.11 mg/L TCLP and meet s. NR 668.48 standards ⁸ |
| | Cadmium Containing Batteries Subcategory. (Note: This subcategory consists of nonwastewaters only.) | Cadmium | 7440–43–9 | NA | RTHRM |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|---|---|---------------------------------|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | Radioactively contaminated cadmium containing batteries. (Note: This subcategory consists of nonwastewaters only) | Cadmium | 7440-43-9 | NA | Macroencapsulation in accordance with s. NR 668.45. |
| D007 ⁹ | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for chromium based on the toxicity characteristic leaching procedure (TCLP) in SW846 ¹³ . | Chromium (Total) | 7440-47-3 | 2.77 and meet s. NR 668.48 standards ⁸ | 0.60 mg/L TCLP and meet s. NR 668.48 standards ⁸ |
| D008 ⁹ | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for lead based on the toxicity characteristic leaching procedure (TCLP) in SW846 ¹³ . | Lead | 7439-92-1 | 0.69 and meet s. NR 668.48 standards ⁸ | 0.75 mg/L TCLP and meet s. NR 668.48 standards ⁸ |
| | Lead Acid Batteries Subcategory (Note: This standard only applies to lead acid batteries that are identified as hazardous wastes and that are not excluded elsewhere from regulation under the land disposal restrictions of this chapter or exempted under other department regulations (see s. NR 666.80). This subcategory consists of nonwastewaters only.) | Lead | 7439-92-1 | NA | RLEAD |
| | Radioactive Lead Solids Subcategory (Note: these lead solids include, but are not limited to, all forms of lead shielding and other elemental forms of lead. These lead solids do not include treatment residuals such as hydroxide sludges, other wastewater treatment residuals, or incinerator ashes that can undergo conventional pozzolanic stabilization, nor do they include organo-lead materials that can be incinerated and stabilized as ash. This subcategory consists of nonwastewaters only.) | Lead | 7439-92-1 | NA | MACRO |
| D009 ⁹ | Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846 ¹³ ; and contain greater than or equal to 260 mg/kg total mercury that also contain organics and are not incinerator residues. (High Mercury-Organic Subcategory) | Mercury | 7439-97-6 | NA | IMERC; OR RMERC |
| | Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846 ¹³ ; and contain greater than or equal to 260 mg/kg total mercury that are inorganic, including incinerator residues and residues from RMERC. (High Mercury-Inorganic Subcategory) | Mercury | 7439-97-6 | NA | RMERC |
| | Nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846 ¹³ ; and contain less than 260 mg/kg total mercury and that are residues from RMERC only. (Low Mercury Subcategory) | Mercury | 7439-97-6 | NA | 0.20 mg/L TCLP and meet s. NR 668.48 standards ⁸ |
| | All other nonwastewaters that exhibit, or are expected to exhibit, the characteristic of toxicity for mercury based on the toxicity characteristic leaching procedure (TCLP) in SW846 ¹³ ; and contain less than 260 mg/kg total mercury and that are not residues from RMERC. (Low Mercury Subcategory) | Mercury | 7439-97-6 | NA | 0.025 mg/L TCLP and meet s. NR 668.48 standards ⁸ |
| | All D009 wastewaters. | Mercury | 7439-97-6 | 0.15 and meet s. NR 668.48 standards ⁸ | NA |
| | Elemental mercury contaminated with radioactive materials. (Note: This subcategory consists of nonwastewaters only.) | Mercury | 7439-97-6 | NA | AMLGM |
| | Hydraulic oil contaminated with Mercury Radioactive Materials Subcategory. (Note: This subcategory consists of nonwastewaters only.) | Mercury | 7439-97-6 | NA | IMERC |
| Radioactively contaminated mercury containing batteries. (Note: This subcategory consists of nonwastewaters only) | Mercury | 7439-97-6 | NA | Macroencapsulation in accordance with s. NR 668.45. | |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|-------------------|--|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| D010 ⁹ | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for selenium based on the toxicity characteristic leaching procedure (TCLP) in SW846 ¹³ . | Selenium | 7782-49-2 | 0.82 and meet s. NR 668.48 standards ⁸ | 5.7 mg/L TCLP and meet s. NR 668.48 standards ⁸ |
| D011 ⁹ | Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for silver based on the toxicity characteristic leaching procedure (TCLP) in SW846 ¹³ . | Silver | 7440-22-4 | 0.43 and meet s. NR 668.48 standards ⁸ | 0.14 mg/L TCLP and meet s. NR 668.48 standards ⁸ |
| | Radioactively contaminated silver containing batteries. (Note: This subcategory consists of nonwastewaters only) | Silver | 7440-22-4 | NA | Macroencapsulation in accordance with s. NR 668.45. |
| D012 ⁹ | Wastes that are TC for Endrin based on the TCLP in SW846 Method 1311 ¹³ . | Endrin | 72-20-8 | BIODG; or CMBST | 0.13 and meet s. NR 668.48 standards ⁸ |
| | | Endrin aldehyde | 7421-93-4 | BIODG; or CMBST | 0.13 and meet s. NR 668.48 standards ⁸ |
| D013 ⁹ | Wastes that are TC for Lindane based on the TCLP in SW846 Method 1311 ¹³ . | alpha-BHC | 319-84-6 | CARBON; or CMBST | 0.066 and meet s. NR 668.48 standards ⁸ |
| | | beta-BHC | 319-85-7 | CARBON; or CMBST | 0.066 and meet s. NR 668.48 standards ⁸ |
| | | delta-BHC | 319-86-8 | CARBON; or CMBST | 0.066 and meet s. NR 668.48 standards ⁸ |
| | | gamma-BHC (Lindane) | 58-89-9 | CARBON; or CMBST | 0.066 and meet s. NR 668.48 standards ⁸ |
| D014 ⁹ | Wastes that are TC for Methoxychlor based on the TCLP in SW846 Method 1311 ¹³ . | Methoxychlor | 72-43-5 | WETOX or CMBST | 0.18 and meet s. NR 668.48 standards ⁸ |
| D015 ⁹ | Wastes that are TC for Toxaphene based on the TCLP in SW846 Method 1311 ¹³ . | Toxaphene | 8001-35-2 | BIODG or CMBST | 2.6 and meet s. NR 668.48 standards ⁸ |
| D016 ⁹ | Wastes that are TC for 2,4-D (2,4-Dichlorophenoxyacetic acid) based on the TCLP in SW846 ¹³ Method 1311. | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 94-75-7 | CHOXD, BIODG, or CMBST | 10 and meet s. NR 668.48 standards ⁸ |
| D017 ⁹ | Wastes that are TC for 2,4,5-TP (Silvex) based on the TCLP in SW846 Method 1311 ¹³ . | 2,4,5-TP (Silvex) | 93-72-1 | CHOXD or CMBST | 7.9 and meet s. NR 668.48 standards ⁸ |
| D018 ⁹ | Wastes that are TC for Benzene based on the TCLP in SW846 Method 1311 ¹³ . | Benzene | 71-43-2 | 0.14 and meet s. NR 668.48 standards ⁸ | 10 and meet s. NR 668.48 standards ⁸ |
| D019 ⁹ | Wastes that are TC for Carbon tetrachloride based on the TCLP in SW846 Method 1311 ¹³ . | Carbon tetrachloride | 56-23-5 | 0.057 and meet s. NR 668.48 standards ⁸ | 6.0 and meet s. NR 668.48 standards ⁸ |
| D020 ⁹ | Wastes that are TC for Chlordane based on the TCLP in SW846 Method 1311 ¹³ . | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 and meet s. NR 668.48 standards ⁸ | 0.26 and meet s. NR 668.48 standards ⁸ |
| D021 ⁹ | Wastes that are TC for Chlorobenzene based on the TCLP in SW846 Method 1311 ¹³ . | Chlorobenzene | 108-90-7 | 0.057 and meet s. NR 668.48 standards ⁸ | 6.0 and meet s. NR 668.48 standards ⁸ |
| D022 ⁹ | Wastes that are TC for Chloroform based on the TCLP in SW846 Method 1311 ¹³ . | Chloroform | 67-66-3 | 0.046 and meet s. NR 668.48 standards ⁸ | 6.0 and meet s. NR 668.48 standards ⁸ |
| D023 ⁹ | Wastes that are TC for o-Cresol based on the TCLP in SW846 Method 1311 ¹³ . | o-Cresol | 95-48-7 | 0.11 and meet s. NR 668.48 standards ⁸ | 5.6 and meet s. NR 668.48 standards ⁸ |
| D024 ⁹ | Wastes that are TC for m-Cresol based on the TCLP in SW846 Method 1311 ¹³ . | m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 and meet s. NR 668.48 standards ⁸ | 5.6 and meet s. NR 668.48 standards ⁸ |
| D025 ⁹ | Wastes that are TC for p-Cresol based on the TCLP in SW846 Method 1311 ¹³ . | p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 and meets. NR 668.48 standards ⁸ | 5.6 and meet s. NR 668.48 standards ⁸ |
| D026 ⁹ | Wastes that are TC for Cresols (Total) based on the TCLP in SW846 Method 1311 ¹³ . | Cresol-mixed isomers (Cresylic acid) (sum of o-, m-, and p-cresol concentrations) | 1319-77-3 | 0.88 and meet s. NR 668.48 standards ⁸ | 11.2 and meet s. NR 668.48 standards ⁸ |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|-------------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| D027 ⁹ | Wastes that are TC for p-Dichlorobenzene based on the TCLP in SW846 Method 1311 ¹³ . | p-Dichlorobenzene (1,4-Dichlorobenzene) | 106-46-7 | 0.090 and meet s. NR 668.48 standards ⁸ | 6.0 and meet s. NR 668.48 standards ⁸ |
| D028 ⁹ | Wastes that are TC for 1,2-Dichloroethane based on the TCLP in SW846 Method 1311 ¹³ . | 1,2-Dichloroethane | 107-06-2 | 0.21 and meet s. NR 668.48 standards ⁸ | 6.0 and meet s. NR 668.48 standards ⁸ |
| D029 ⁹ | Wastes that are TC for 1,1-Dichloroethylene based on the TCLP in SW846 Method 1311 ¹³ . | 1,1-Dichloroethylene | 75-35-4 | 0.025 and meet s. NR 668.48 standards ⁸ | 6.0 and meet s. NR 668.48 standards ⁸ |
| D030 ⁹ | Wastes that are TC for 2,4-Dinitrotoluene based on the TCLP in SW846 Method 1311 ¹³ . | 2,4-Dinitrotoluene | 121-14-2 | 0.32 and meet s. NR 668.48 standards ⁸ | 140 and meet s. NR 668.48 standards ⁸ |
| D031 ⁹ | Wastes that are TC for Heptachlor based on the TCLP in SW846 Method 1311 ¹³ . | Heptachlor | 76-44-8 | 0.0012 and meet s. NR 668.48 standards ⁸ | 0.066 and meet s. NR 668.48 standards ⁸ |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 and meet s. NR 668.48 standards ⁸ | 0.066 and meet s. NR 668.48 standards ⁸ |
| D032 ⁹ | Wastes that are TC for Hexachlorobenzene based on the TCLP in SW846 Method 1311 ¹³ . | Hexachlorobenzene | 118-74-1 | 0.055 and meet s. NR 668.48 standards ⁸ | 10 and meet s. NR 668.48 standards ⁸ |
| D033 ⁹ | Wastes that are TC for Hexachlorobutadiene based on the TCLP in SW846 Method 1311 ¹³ . | Hexachlorobutadiene | 87-68-3 | 0.055 and meet s. NR 668.48 standards ⁸ | 5.6 and meet s. NR 668.48 standards ⁸ |
| D034 ⁹ | Wastes that are TC for Hexachloroethane based on the TCLP in SW846 Method 1311 ¹³ . | Hexachloroethane | 67-72-1 | 0.055 and meet s. NR 668.48 standards ⁸ | 30 and meet s. NR 668.48 standards ⁸ |
| D035 ⁹ | Wastes that are TC for Methyl ethyl ketone based on the TCLP in SW846 Method 1311 ¹³ . | Methyl ethyl ketone | 78-93-3 | 0.28 and meet s. NR 668.48 standards ⁸ | 36 and meet s. NR 668.48 standards ⁸ |
| D036 ⁹ | Wastes that are TC for Nitrobenzene based on the TCLP in SW846 Method 1311 ¹³ . | Nitrobenzene | 98-95-3 | 0.068 and meet s. NR 668.48 standards ⁸ | 14 and meet s. NR 668.48 standards ⁸ |
| D037 ⁹ | Wastes that are TC for Pentachlorophenol based on the TCLP in SW846 Method 1311 ¹³ . | Pentachlorophenol | 87-86-5 | 0.089 and meet s. NR 668.48 standards ⁸ | 7.4 and meet s. NR 668.48 standards ⁸ |
| D038 ⁹ | Wastes that are TC for Pyridine based on the TCLP in SW846 Method 1311 ¹³ . | Pyridine | 110-86-1 | 0.014 and meet s. NR 668.48 standards ⁸ | 16 and meet s. NR 668.48 standards ⁸ |
| D039 ⁹ | Wastes that are TC for Tetrachloroethylene based on the TCLP in SW846 Method 1311 ¹³ . | Tetrachloroethylene | 127-18-4 | 0.056 and meet s. NR 668.48 standards ⁸ | 6.0 and meet s. NR 668.48 standards ⁸ |
| D040 ⁹ | Wastes that are TC for Trichloroethylene based on the TCLP in SW846 Method 1311 ¹³ . | Trichloroethylene | 79-01-6 | 0.054 and meet s. NR 668.48 standards ⁸ | 6.0 and meet s. NR 668.48 standards ⁸ |
| D041 ⁹ | Wastes that are TC for 2,4,5-Trichlorophenol based on the TCLP in SW846 Method 1311 ¹³ . | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 and meet s. NR 668.48 standards ⁸ | 7.4 and meet s. NR 668.48 standards ⁸ |
| D042 ⁹ | Wastes that are TC for 2,4,6-Trichlorophenol based on the TCLP in SW846 Method 1311 ¹³ . | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 and meet s. NR 668.48 standards ⁸ | 7.4 and meet s. NR 668.48 standards ⁸ |
| D043 ⁹ | Wastes that are TC for Vinyl chloride based on the TCLP in SW846 Method 1311 ¹³ . | Vinyl chloride | 75-01-4 | 0.27 and meet s. NR 668.48 standards ⁸ | 6.0 and meet s. NR 668.48 standards ⁸ |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters | |
|--------------------------------|---|--|-------------------------|--|--|----------------|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ | |
| F001, F002, F003, F004, & F005 | F001, F002, F003, F004 and/or F005 solvent wastes that contain any combination of one or more of the following spent solvents: acetone, benzene, n-butyl alcohol, carbon disulfide, carbon tetrachloride, chlorinated fluorocarbons, chlorobenzene, o-cresol, m-cresol, p-cresol, cyclohexanone, o-dichlorobenzene, 2-ethoxyethanol, ethyl acetate, ethyl benzene, ethyl ether, isobutyl alcohol, methanol, methylene chloride, methyl ethyl ketone, methyl isobutyl ketone, nitrobenzene, 2-nitropropane, pyridine, tetrachloroethylene, toluene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,1,2-trichloro-1,2,2-trifluoroethane, trichloroethylene, trichlorofluoromethane, and/or xylenes [except as specifically noted in other subcategories]. See further details of these listings in s. NR 661.31. | Acetone | 67-64-1 | 0.28 | 160 | |
| | | Benzene | 71-43-2 | 0.14 | 10 | |
| | | n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 | |
| | | Carbon disulfide | 75-15-0 | 3.8 | NA | |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 | |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 | |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 | |
| | | m-Cresol(difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 | |
| | | p-Cresol(difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 | |
| | | Cresol-mixed isomers (Cresylic acid)(sum of o-, m-, and p-cresol concentrations) | 1319-77-3 | 0.88 | 11.2 | |
| | | Cyclohexanone | 108-94-1 | 0.36 | NA | |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 | |
| | | Ethyl acetate | 141-78-6 | 0.34 | 33 | |
| | | Ethyl benzene | 100-41-4 | 0.057 | 10 | |
| | | Ethyl ether | 60-29-7 | 0.12 | 160 | |
| | | Isobutyl alcohol | 78-83-1 | 5.6 | 170 | |
| | | Methanol | 67-56-1 | 5.6 | NA | |
| | | Methylene chloride | 75-9-2 | 0.089 | 30 | |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 | |
| | | Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 | |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 | |
| | | Pyridine | 110-86-1 | 0.014 | 16 | |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 | |
| | | Toluene | 108-88-3 | 0.080 | 10 | |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 | |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 | |
| | | 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.057 | 30 | |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 | |
| | | Trichloromono-fluoromethane | 75-69-4 | 0.020 | 30 | |
| | | Xylenes-mixed isomers(sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 | |
| | | F003 and/or F005 solvent wastes that contain any combination of one or more of the following 3 solvents as the only listed F001-5 solvents: carbon disulfide, cyclohexanone and/or methanol. (formerly s. NR 675.21 (3). | Carbon disulfide | 75-15-0 | 3.8 | 4.8 mg/L TCLP |
| | | | Cyclohexanone | 108-94-1 | 0.36 | 0.75 mg/L TCLP |
| | | | Methanol | 67-56-1 | 5.6 | 0.75 mg/L TCLP |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|----------------------------------|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | F005 solvent waste containing 2-Nitropropane as the only listed F001-5 solvent. | 2-Nitropropane | 79-46-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | F005 solvent waste containing 2-Ethoxyethanol as the only listed F001-5 solvent. | 2-Ethoxyethanol | 110-80-5 | BIODG; or CMBST | CMBST |
| F006 | Wastewater treatment sludges from electroplating operations except from the following processes: (1) Sulfuric acid anodizing of aluminum; (2) tin plating on carbon steel; (3) zinc plating (segregated basis) on carbon steel; (4) aluminum or zinc-aluminum plating on carbon steel; (5) cleaning/stripping associated with tin, zinc and aluminum plating on carbon steel; and (6) chemical etching and milling of aluminum. | Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Silver | 7440-22-4 | NA | 0.14 mg/L TCLP |
| F007 | Spent cyanide plating bath solutions from electroplating operations. | Cadmium | 7440-43-9 | NA | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Silver | 7440-22-4 | NA | 0.14 mg/L TCLP |
| F008 | Plating bath residues from the bottom of plating baths from electroplating operations where cyanides are used in the process. | Cadmium | 7440-43-9 | NA | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Silver | 7440-22-4 | NA | 0.14 mg/L TCLP |
| F009 | Spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process. | Cadmium | 7440-43-9 | NA | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Silver | 7440-22-4 | NA | 0.14 mg/L TCLP |
| F010 | Quenching bath residues from oil baths from metal heat treating operations where cyanides are used in the process. | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | NA |
| F011 | Spent cyanide solutions from salt bath pot cleaning from metal heat treating operations. | Cadmium | 7440-43-9 | NA | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Silver | 7440-22-4 | NA | 0.14 mg/L TCLP |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------------------------|---|---|---|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| F012 | Quenching wastewater treatment sludges from metal heat treating operations where cyanides are used in the process. | Cadmium | 7440-43-9 | NA | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Silver | 7440-22-4 | NA | 0.14 mg/L TCLP |
| F019 | Wastewater treatment sludges from the chemical conversion coating of aluminum except from zirconium phosphating in aluminum can washing when such phosphating is an exclusive conversion coating process. | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| F020, F021, F022, F023, F026 | Wastes (except wastewater and spent carbon from hydrogen chloride purification) from the production or manufacturing use (as a reactant, chemical intermediate or component in a formulating process) of: (1) tri- or tetrachlorophenol, or of intermediates used to produce their pesticide derivatives, excluding wastes from the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol (F020); (2) pentachlorophenol, or of intermediates used to produce its derivatives (i.e., F021); (3) tetra-, penta-, or hexachlorobenzenes under alkaline conditions (i.e., F022); and from the production of materials on equipment previously used for the production or manufacturing use (as a reactant, chemical intermediate or component in a formulating process) of: (1) tri- or tetrachlorophenols, excluding wastes from equipment used only for the production of Hexachlorophene from highly purified 2,4,5-trichlorophenol (F023); (2) tetra-, penta-, or hexachlorobenzenes under alkaline conditions (i.e., F026). | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| | | F024 | Process wastes, including but not limited to, distillation residues, heavy ends, tars and reactor clean-out wastes, from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including 5, with varying amounts and positions of chlorine substitution. (This listing does not include wastewaters, wastewater treatment sludges, spent catalysts and wastes listed in s. NR 661.31 or s. NR 661.32). | All F024 wastes | NA |
| 2-Chloro-1,3-butadiene | 126-99-8 | | | 0.057 | 0.28 |
| 3-Chloropropylene | 107-05-1 | | | 0.036 | 30 |
| 1,1-Dichloroethane | 75-34-3 | | | 0.059 | 6.0 |
| 1,2-Dichloroethane | 107-06-2 | | | 0.21 | 6.0 |
| 1,2-Dichloropropane | 78-87-5 | | | 0.85 | 18 |
| cis-1,3-Dichloropropylene | 10061-01-5 | | | 0.036 | 18 |
| trans-1,3-Dichloropropylene | 10061-02-6 | | | 0.036 | 18 |
| bis(2-Ethylhexyl) phthalate | 117-81-7 | | | 0.28 | 28 |
| Hexachloroethane | 67-72-1 | | | 0.055 | 30 |
| Chromium (Total) | 7440-47-3 | | | 2.77 | 0.60 mg/L TCLP |
| Nickel | 7440-02-0 | | | 3.98 | 11 mg/L TCLP |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|---|---|---|--|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| F025 | Condensed light ends from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including 5, with varying amounts and positions of chlorine substitution. F025 – Light Ends Subcategory | Carbon tetrachloride | 56–23–5 | 0.057 | 6.0 |
| | | Chloroform | 67–66–3 | 0.046 | 6.0 |
| | | 1,2–Dichloroethane | 107–06–2 | 0.21 | 6.0 |
| | | 1,1–Dichloroethylene | 75–35–4 | 0.025 | 6.0 |
| | | Methylene chloride | 75–9–2 | 0.089 | 30 |
| | | 1,1,2–Trichloroethane | 79–00–5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79–01–6 | 0.054 | 6.0 |
| | | Vinyl chloride | 75–01–4 | 0.27 | 6.0 |
| | | Spent filters and filter aids, and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons, by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including 5, with varying amounts and positions of chlorine substitution. F025 – Spent Filters/Aids and Desiccants Subcategory | Carbon tetrachloride | 56–23–5 | 0.057 |
| | Chloroform | | 67–66–3 | 0.046 | 6.0 |
| | Hexachlorobenzene | | 118–74–1 | 0.055 | 10 |
| | Hexachlorobutadiene | | 87–68–3 | 0.055 | 5.6 |
| | Hexachloroethane | | 67–72–1 | 0.055 | 30 |
| | Methylene chloride | | 75–9–2 | 0.089 | 30 |
| | 1,1,2–Trichloroethane | | 79–00–5 | 0.054 | 6.0 |
| | Trichloroethylene | | 79–01–6 | 0.054 | 6.0 |
| | Vinyl chloride | | 75–01–4 | 0.27 | 6.0 |
| | F027 | Discarded unused formulations containing tri-, tetra-, or pentachlorophenol or discarded unused formulations containing compounds derived from these chlorophenols. (This listing does not include formulations containing hexachlorophene synthesized from prepurified 2,4,5–trichlorophenol as the sole component.). | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 |
| HxCDFs (All Hexachlorodibenzofurans) | | | NA | 0.000063 | 0.001 |
| PeCDDs (All Pentachlorodibenzo-p-dioxins) | | | NA | 0.000063 | 0.001 |
| PeCDFs (All Pentachlorodibenzofurans) | | | NA | 0.000035 | 0.001 |
| Pentachlorophenol | | | 87–86–5 | 0.089 | 7.4 |
| TCDDs (All Tetrachlorodibenzo-p-dioxins) | | | NA | 0.000063 | 0.001 |
| TCDFs (All Tetrachlorodibenzofurans) | | | NA | 0.000063 | 0.001 |
| 2,4,5–Trichlorophenol | | | 95–95–4 | 0.18 | 7.4 |
| 2,4,6–Trichlorophenol | | | 88–06–2 | 0.035 | 7.4 |
| 2,3,4,6–Tetrachlorophenol | | | 58–90–2 | 0.030 | 7.4 |
| F028 | Residues resulting from the incineration or thermal treatment of soil contaminated with EPA hazardous waste numbers F020, F021, F023, F026 and F027. | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|--|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| F032 | Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that currently use or have previously used chlorophenolic formulations (except potentially cross-contaminated wastes that have had the F032 waste code deleted in accordance with s. NR 661.35 or potentially cross-contaminated wastes that are otherwise currently regulated as hazardous wastes (for instance, F034 or F035), and where the generator does not resume or initiate use of chlorophenolic formulations). This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or penta-chlorophenol. | Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | 2-4-Dimethyl phenol | 105-67-9 | 0.036 | 14 |
| | | Fluorene | 86-73-7 | 0.059 | 3.4 |
| | | Hexachlorodibenzo-p-dioxins | NA | 0.000063, or CMBST ¹¹ | 0.001, or CMBST ¹¹ |
| | | Hexachlorodibenzofurans | NA | 0.000063, or CMBST ¹¹ | 0.001, or CMBST ¹¹ |
| | | Indeno (1,2,3-c,d) pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Pentachlorodibenzo-p-dioxins | NA | 0.000063, or CMBST ¹¹ | 0.001, or CMBST ¹¹ |
| | | Pentachlorodibenzofurans | NA | 0.000035, or CMBST ¹¹ | 0.001, or CMBST ¹¹ |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Tetrachlorodibenzo-p-dioxins | NA | 0.000063, or CMBST ¹¹ | 0.001, or CMBST ¹¹ |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|--|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Tetrachlorodibenzofurans | NA | 0.000063, or CMBST ¹¹ | 0.001, or CMBST ¹¹ |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| F034 | Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage and spent formulations from wood preserving processes generated at plants that use creosote formulations. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol. | Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Fluorene | 86-73-7 | 0.059 | 3.4 |
| | | Indeno (1,2,3-c,d) pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| F035 | Wastewaters (except those that have not come into contact with process contaminants), process residuals, preservative drippage and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium. This listing does not include K001 bottom sediment sludge from the treatment of wastewater from wood preserving processes that use creosote and/or pentachlorophenol. | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| F037 | Petroleum refinery primary oil/water/solids separation sludge—Any sludge generated from the gravitational separation of oil/water/solids during the storage or treatment of process wastewaters and oily cooling wastewaters from petroleum refineries. Such sludges include, but are not limited to, those generated in: oil/water/solids separators; tanks and impoundments; ditches and other conveyances; sumps; and stormwater units receiving dry weather flow. Sludge generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges generated in aggressive biological treatment units as defined in s. NR 661.31 (2) (b) (including sludges generated in one or more additional units after wastewaters have been treated in aggressive biological treatment units) and K051 wastes are not included in this listing. | Acenaphthene | 83-32-9 | 0.059 | NA |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers(sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 11 mg/L TCLP |
| F038 | Petroleum refinery secondary (emulsified) oil/water/solids separation sludge and/or float generated from the physical and/or chemical separation of oil/water/solids in process wastewaters and oily cooling wastewaters from petroleum refineries. Such wastes include, but are not limited to, all sludges and floats generated in: induced air floatation (IAF) units, tanks and impoundments, and all sludges generated in DAF units. Sludges generated in stormwater units that do not receive dry weather flow, sludges generated from non-contact once-through cooling waters segregated for treatment from other process or oily cooling waters, sludges and floats generated in aggressive biological treatment units as defined in s. NR 661.31 (2) (b) (including sludges and floats generated in one or more additional units after wastewaters have been treated in aggressive biological units) and F037, K048 and K051 are not included in this listing. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers(sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 11 mg/L TCLP |
| F039 | Leachate (liquids that have percolated through land disposed wastes) resulting from the disposal of more than one restricted waste classified as hazardous under subch. D. [Leachate resulting from the disposal of one or more of the following EPA hazardous wastes and no other hazardous wastes retains its EPA hazardous waste numbers: F020, F021, F022, F026, F027 or F028]. | Acenaphthylene | 208-96-8 | 0.059 | 3.4 |
| | | Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| | | Acetone | 67-64-1 | 0.28 | 160 |
| | | Acetonitrile | 75-05-8 | 5.6 | NA |
| | | Acetophenone | 96-86-2 | 0.010 | 9.7 |
| | | 2-Acetylaminofluorene | 53-96-3 | 0.059 | 140 |
| | | Acrolein | 107-02-8 | 0.29 | NA |
| | | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| | | Aldrin | 309-00-2 | 0.021 | 0.066 |
| | | 4-Aminobiphenyl | 92-67-1 | 0.13 | NA |
| | | Aniline | 62-53-3 | 0.81 | 14 |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | 0-Anisidine (2-methoxyaniline) | 90-04-0 | 0.010 | 0.66 |
| | | Aramite | 140-57-8 | 0.36 | NA |
| | | alpha-BHC | 319-84-6 | 0.00014 | 0.066 |
| | | beta-BHC | 319-85-7 | 0.00014 | 0.066 |
| | | delta-BHC | 319-86-8 | 0.023 | 0.066 |
| | | gamma-BHC | 58-89-9 | 0.0017 | 0.066 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 1.8 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Bromodichloromethane | 75-27-4 | 0.35 | 15 |
| | | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | 4-Bromophenyl phenyl ether | 101-55-3 | 0.055 | 15 |
| | | n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |
| | | Butyl benzyl phthalate | 85-68-7 | 0.017 | 28 |
| | | 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | 88-85-7 | 0.066 | 2.5 |
| | | Carbon disulfide | 75-15-0 | 3.8 | NA |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| | | p-Chloroaniline | 106-47-8 | 0.46 | 16 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chlorobenzilate | 510-15-6 | 0.10 | NA |
| | | 2-Chloro-1,3-butadiene | 126-99-8 | 0.057 | NA |
| | | Chlorodibromomethane | 124-48-1 | 0.057 | 15 |
| | | Chloroethane | 75-00-3 | 0.27 | 6.0 |
| | | bis(2-Chloroethoxy)methane | 111-91-1 | 0.036 | 7.2 |
| | | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | bis(2-Chloroisopropyl)ether | 39638-32-9 | 0.055 | 7.2 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|--|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | p-Chloro-m-cresol | 59-50-7 | 0.018 | 14 |
| | | Chloromethane (Methyl chloride) | 74-87-3 | 0.19 | 30 |
| | | 2-Chloronaphthalene | 91-58-7 | 0.055 | 5.6 |
| | | 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| | | 3-Chloropropylene | 107-05-1 | 0.036 | 30 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | p-Cresidine | 120-71-8 | 0.010 | 0.66 |
| | | m-Cresol(difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol(difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| | | Cyclohexanone | 108-94-1 | 0.36 | NA |
| | | 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.11 | 15 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| | | Dibromomethane | 74-95-3 | 0.11 | 15 |
| | | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 94-75-7 | 0.72 | 10 |
| | | o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| | | p,p'-DDD | 72-54-8 | 0.023 | 0.087 |
| | | o,p'-DDE | 3424-82-6 | 0.031 | 0.087 |
| | | p,p'-DDE | 72-55-9 | 0.031 | 0.087 |
| | | o,p'-DDT | 789-02-6 | 0.0039 | 0.087 |
| | | p,p'-DDT | 50-29-3 | 0.0039 | 0.087 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Dibenz(a,e)pyrene | 192-65-4 | 0.061 | NA |
| | | m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Dichlorodifluoromethane | 75-71-8 | 0.23 | 7.2 |
| | | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6.0 |
| | | trans-1,2-Dichloroethylene | 156-60-5 | 0.054 | 30 |
| | | 2,4-Dichlorophenol | 120-83-2 | 0.044 | 14 |
| | | 2,6-Dichlorophenol | 87-65-0 | 0.044 | 14 |
| | | 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | cis-1,3-Dichloropropylene | 10061-01-5 | 0.036 | 18 |
| | | trans-1,3-Dichloropropylene | 10061-02-6 | 0.036 | 18 |
| | | Dieldrin | 60-57-1 | 0.017 | 0.13 |
| | | Diethyl phthalate | 84-66-2 | 0.20 | 28 |
| | | 2,4-Dimethylaniline (2,4-xylidine) | 95-68-1 | 0.010 | 0.66 |
| | | 2-4-Dimethyl phenol | 105-67-9 | 0.036 | 14 |
| | | Dimethyl phthalate | 131-11-3 | 0.047 | 28 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | 1,4-Dinitrobenzene | 100-25-4 | 0.32 | 2.3 |
| | | 4,6-Dinitro-o-cresol | 534-52-1 | 0.28 | 160 |
| | | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| | | 2,4-Dinitrotoluene | 121-14-2 | 0.32 | 140 |
| | | 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 28 |
| | | Di-n-octyl phthalate | 117-84-0 | 0.017 | 28 |
| | | Di-n-propylnitrosamine | 621-64-7 | 0.40 | 14 |
| | | 1,4-Dioxane | 123-91-1 | 12.0 | 170 |
| | | Diphenylamine (difficult to distinguish from diphenylnitrosamine) | 122-39-4 | 0.92 | NA |
| | | Diphenylnitrosamine (difficult to distinguish from diphenylamine) | 86-30-6 | 0.92 | NA |
| | | 1,2-Diphenylhydrazine | 122-66-7 | 0.087 | NA |
| | | Disulfoton | 298-04-4 | 0.017 | 6.2 |
| | | Endosulfan I | 939-98-8 | 0.023 | 0.066 |
| | | Endosulfan II | 33213-6-5 | 0.029 | 0.13 |
| | | Endosulfan sulfate | 1031-07-8 | 0.029 | 0.13 |
| | | Endrin | 72-20-8 | 0.0028 | 0.13 |
| | | Endrin aldehyde | 7421-93-4 | 0.025 | 0.13 |
| | | Ethyl acetate | 141-78-6 | 0.34 | 33 |
| | | Ethyl cyanide (Propanenitrile) | 107-12-0 | 0.24 | 360 |
| | | Ethyl benzene | 100-41-4 | 0.057 | 10 |
| | | Ethyl ether | 60-29-7 | 0.12 | 160 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Ethyl methacrylate | 97-63-2 | 0.14 | 160 |
| | | Ethylene oxide | 75-21-8 | 0.12 | NA |
| | | Famphur | 52-85-7 | 0.017 | 15 |
| | | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| | | Fluorene | 86-73-7 | 0.059 | 3.4 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| | | 1, 2, 3, 4, 6, 7, 8-Heptachlorodibenzo-p-dioxin (1, 2, 3, 4, 6, 7, 8 HpCDD) | 35822-46-9 | 0.000035 | 0.0025 |
| | | 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF) | 67562-39-4 | 0.000035 | 0.0025 |
| | | 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF) | 55673-89-7 | 0.000035 | 0.0025 |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| | | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Hexachloropropylene | 1888-71-7 | 0.035 | 30 |
| | | Indeno (1,2,3-c,d) pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Iodomethane | 74-88-4 | 0.19 | 65 |
| | | Isobutyl alcohol | 78-83-1 | 5.6 | 170 |
| | | Isodrin | 465-73-6 | 0.021 | 0.066 |
| | | Isosafrole | 120-58-1 | 0.081 | 2.6 |
| | | Kepone | 143-50-8 | 0.0011 | 0.13 |
| | | Methacrylonitrile | 126-98-7 | 0.24 | 84 |
| | | Methanol | 67-56-1 | 5.6 | NA |
| | | Methapyrilene | 91-80-5 | 0.081 | 1.5 |
| | | Methoxychlor | 72-43-5 | 0.25 | 0.18 |
| | | 3-Methylcholanthrene | 56-49-5 | 0.0055 | 15 |
| | | 4,4-Methylene bis(2-chloroaniline) | 101-14-4 | 0.50 | 30 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| | | Methyl methacrylate | 80-62-6 | 0.14 | 160 |
| | | Methyl methanesulfonate | 66-27-3 | 0.018 | NA |
| | | Methyl parathion | 298-00-0 | 0.014 | 4.6 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | 2-Naphthylamine | 91-59-8 | 0.52 | NA |
| | | p-Nitroaniline | 100-01-6 | 0.028 | 28 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | 5-Nitro-o-toluidine | 99-55-8 | 0.32 | 28 |
| | | p-Nitrophenol | 100-02-7 | 0.12 | 29 |
| | | N-Nitrosodiethylamine | 55-18-5 | 0.40 | 28 |
| | | N-Nitrosodimethylamine | 62-75-9 | 0.40 | NA |
| | | N-Nitroso-di-n-butylamine | 924-16-3 | 0.40 | 17 |
| | | N-Nitrosomethylamine | 10595-95-6 | 0.40 | 2.3 |
| | | N-Nitrosomorpholine | 59-89-2 | 0.40 | 2.3 |
| | | N-Nitrosopiperidine | 100-75-4 | 0.013 | 35 |
| | | N-Nitrosopyrrolidine | 930-55-2 | 0.013 | 35 |
| | | 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) | 3268-87-9 | 0.000063 | 0.005 |
| | | 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF) | 39001-02-0 | 0.000063 | 0.005 |
| | | Parathion | 56-38-2 | 0.014 | 4.6 |
| | | Total PCBs(sum of all PCB isomers, or all Aroclors) | 1336-36-3 | 0.10 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | Pentachloronitrobenzene | 82-68-8 | 0.055 | 4.8 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Phenacetin | 62-44-2 | 0.081 | 16 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | 1,3-Phenylenediamine | 108-45-2 | 0.010 | 0.66 |
| | | Phorate | 298-02-2 | 0.021 | 4.6 |
| | | Phthalic anhydride | 85-44-9 | 0.055 | NA |
| | | Pronamide | 23950-58-5 | 0.093 | 1.5 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Pyridine | 110-86-1 | 0.014 | 16 |
| | | Safrole | 94-59-7 | 0.081 | 22 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Silvex (2,4,5-TP) | 93-72-1 | 0.72 | 7.9 |
| | | 2,4,5-T | 93-76-5 | 0.72 | 7.9 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| | | Bromoform (Tri-bromomethane) | 75-25-2 | 0.63 | 15 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| | | Trichloromonofluoromethane | 75-69-4 | 0.020 | 30 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 1,2,3-Trichloropropane | 96-18-4 | 0.85 | 30 |
| | | 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.057 | 30 |
| | | tris(2,3-Dibromopropyl) phosphate | 126-72-7 | 0.11 | NA |
| | | Vinyl chloride | 75-01-4 | 0.27 | 6.0 |
| | | Xylenes-mixed isomers(sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Antimony | 7440-36-0 | 1.9 | 1.15 mg/L TCLP |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Barium | 7440-39-3 | 1.2 | 21 mg/L TCLP |
| | | Beryllium | 7440-41-7 | 0.82 | NA |
| | | Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | NA |
| | | Fluoride | 16964-48-8 | 35 | NA |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Mercury | 7439-97-6 | 0.15 | 0.025 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Selenium | 7782-49-2 | 0.82 | 5.7 mg/L TCLP |
| | | Silver | 7440-22-4 | 0.43 | 0.14 mg/L TCLP |
| | | Sulfide | 8496-25-8 | 14 | NA |
| | | Thallium | 7440-28-0 | 1.4 | NA |
| K001 | Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol. | Vanadium | 7440-62-2 | 4.3 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes—mixed isomers(sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K002 | Wastewater treatment sludge from the production of chrome yellow and orange pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K003 | Wastewater treatment sludge from the production of molybdate orange pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K004 | Wastewater treatment sludge from the production of zinc yellow pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K005 | Wastewater treatment sludge from the production of chrome green pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| K006 | Wastewater treatment sludge from the production of chrome oxide green pigments (anhydrous). | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | Wastewater treatment sludge from the production of chrome oxide green pigments (hydrated). | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | NA |
| K007 | Wastewater treatment sludge from the production of iron blue pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| K008 | Oven residue from the production of chrome oxide green pigments. | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K009 | Distillation bottoms from the production of acetaldehyde from ethylene. | Chloroform | 67-66-3 | 0.046 | 6.0 |
| K010 | Distillation side cuts from the production of acetaldehyde from ethylene. | Chloroform | 67-66-3 | 0.046 | 6.0 |
| K011 | Bottom stream from the wastewater stripper in the production of acrylonitrile. | Acetonitrile | 75-05-8 | 5.6 | 38 |
| | | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| | | Acrylamide | 79-06-1 | 19 | 23 |
| | | Benzene | 71-43-2 | 0.14 | 10 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Cyanide (Total) | 57-12-5 | 1.2 | 590 |
| K013 | Bottom stream from the acetonitrile column in the production of acrylonitrile. | Acetonitrile | 75-05-8 | 5.6 | 38 |
| | | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| | | Acrylamide | 79-06-1 | 19 | 23 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Cyanide (Total) | 57-12-5 | 1.2 | 590 |
| K014 | Bottoms from the acetonitrile purification column in the production of acrylonitrile. | Acetonitrile | 75-05-8 | 5.6 | 38 |
| | | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| | | Acrylamide | 79-06-1 | 19 | 23 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Cyanide (Total) | 57-12-5 | 1.2 | 590 |
| K015 | Still bottoms from the distillation of benzyl chloride. | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benzal chloride | 98-87-3 | 0.055 | 6.0 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| K016 | Heavy ends or distillation residues from the production of carbon tetrachloride. | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| K017 | Heavy ends (still bottoms) from the purification column in the production of epichlorohydrin. | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| | | 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |
| | | 1,2,3-Trichloropropane | 96-18-4 | 0.85 | 30 |
| K018 | Heavy ends from the fractionation column in ethyl chloride production. | Chloroethane | 75-00-3 | 0.27 | 6.0 |
| | | Chloromethane | 74-87-3 | 0.19 | NA |
| | | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|--|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Pentachloroethane | 76-01-7 | NA | 6.0 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| K019 | Heavy ends from the distillation of ethylene dichloride in ethylene dichloride production. | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | NA |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | NA |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| K020 | Heavy ends from the distillation of vinyl chloride in vinyl chloride monomer production. | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| K021 | Aqueous spent antimony catalyst waste from fluoromethanes production. | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Antimony | 7440-36-0 | 1.9 | 1.15 mg/L TCLP |
| K022 | Distillation bottom tars from the production of phenol/acetone from cumene. | Toluene | 108-88-3 | 0.080 | 10 |
| | | Acetophenone | 96-86-2 | 0.010 | 9.7 |
| | | Diphenylamine (difficult to distinguish from diphenylnitrosamine) | 122-39-4 | 0.92 | 13 |
| | | Diphenylnitrosamine (difficult to distinguish from diphenylamine) | 86-30-6 | 0.92 | 13 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| K023 | Distillation light ends from the production of phthalic anhydride from naphthalene. | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|--|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| K024 | Distillation bottoms from the production of phthalic anhydride from naphthalene. | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| K025 | Distillation bottoms from the production of nitrobenzene by the nitration of benzene. | NA | NA | LLEXT fb SSTRP fb CARBN; or CMBST | CMBST |
| K026 | Stripping still tails from the production of methyl ethyl pyridines. | NA | NA | CMBST | CMBST |
| K027 | Centrifuge and distillation residues from toluene diisocyanate production. | NA | NA | CARBN; or CMBST | CMBST |
| K028 | Spent catalyst from the hydrochlorinator reactor in the production of 1,1,1-trichloroethane. | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| | | trans-1,2-Dichloroethylene | 156-60-5 | 0.054 | 30 |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Pentachloroethane | 76-01-7 | NA | 6.0 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Cadmium | 7440-43-9 | 0.69 | NA |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP | | |
| K029 | Waste from the product steam stripper in the production of 1,1,1-trichloroethane. | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| | | 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6.0 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| | | Vinyl chloride | 75-01-4 | 0.27 | 6.0 |
| K030 | Column bodies or heavy ends from the combined production of trichloroethylene and perchloroethylene. | o-Dichlorobenzene | 95-50-1 | 0.088 | NA |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | NA |
| | | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Hexachloropropylene | 1888-71-7 | NA | 30 |
| | | Pentachlorobenzene | 608-93-5 | NA | 10 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|--|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Pentachloroethane | 76-01-7 | NA | 6.0 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| K031 | By-product salts generated in the production of MSMA and cacodylic acid. | Arsenic | 7440-38-2 | 14 | 5.0 mg/L TCLP |
| K032 | Wastewater treatment sludge from the production of chlordane. | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| | | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| | | Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| K033 | Wastewater and scrub water from the chlorination of cyclopentadiene in the production of chlordane. | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| K034 | Filter solids from the filtration of hexachlorocyclopentadiene in the production of chlordane. | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| K035 | Wastewater treatment sludges generated in the production of creosote. | Acenaphthene | 83-32-9 | NA | 3.4 |
| | | Anthracene | 120-12-7 | NA | 3.4 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol(difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol(difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| | | Dibenz(a,h)anthracene | 53-70-3 | NA | 8.2 |
| | | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| | | Fluorene | 86-73-7 | NA | 3.4 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | NA | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| Phenol | 108-95-2 | 0.039 | 6.2 | | |
| Pyrene | 129-00-0 | 0.067 | 8.2 | | |
| K036 | Still bottoms from toluene reclamation distillation in the production of disulfoton. | Disulfoton | 298-04-4 | 0.017 | 6.2 |
| K037 | Wastewater treatment sludges from the production of disulfoton. | Disulfoton | 298-04-4 | 0.017 | 6.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| K038 | Wastewater from the washing and stripping of phorate production. | Phorate | 298-02-2 | 0.021 | 4.6 |
| K039 | Filter cake from the filtration of diethylphosphorodithioic acid in the production of phorate. | NA | NA | CARBN; or CMBST | CMBST |
| K040 | Wastewater treatment sludge from the production of phorate. | Phorate | 298-02-2 | 0.021 | 4.6 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|--|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| K041 | Wastewater treatment sludge from the production of toxaphene. | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| K042 | Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5-T. | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| K043 | 2,6-Dichlorophenol waste from the production of 2,4-D. | 2,4-Dichlorophenol | 120-83-2 | 0.044 | 14 |
| | | 2,6-Dichlorophenol | 187-65-0 | 0.044 | 14 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| | | 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| K044 | Wastewater treatment sludges from the manufacturing and processing of explosives. | NA | NA | DEACT | DEACT |
| K045 | Spent carbon from the treatment of wastewater containing explosives. | NA | NA | DEACT | DEACT |
| K046 | Wastewater treatment sludges from the manufacturing, formulation and loading of lead-based initiating compounds. | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K047 | Pink/red water from TNT operations | NA | NA | DEACT | DEACT |
| K048 | Dissolved air flotation (DAF) float from the petroleum refining industry. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-33 | 0.080 | 10 |
| | | Xylenes-mixed isomers(sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 11 mg/L TCLP |
| K049 | Stop oil emulsion solids from the petroleum refining industry. | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Carbon disulfide | 75-15-0 | 3.8 | NA |
| | | Chrysene | 2218-01-9 | 0.059 | 3.4 |
| | | 2,4-Dimethylphenol | 105-67-9 | 0.036 | NA |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers(sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | NA |
| Nickel | 7440-02-0 | NA | 11 mg/L TCLP | | |
| K050 | Heat exchanger bundle cleaning sludge from the petroleum refining industry. | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 11 mg/L TCLP |
| K051 | API separator sludge from the petroleum refining industry. | Acenaphthene | 83-32-9 | 0.059 | NA |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | Chrysene | 2218-01-9 | 0.059 | 3.4 |
| | | Di-n-butyl phthalate | 105-67-9 | 0.057 | 28 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | NA |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.08 | 10 |
| | | Xylenes-mixed isomers(sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | NA |
| Nickel | 7440-02-0 | NA | 11 mg/L TCLP | | |
| K052 | Tank bottoms (leaded) from the petroleum refining industry. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol(difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol(difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| | | 2,4-Dimethylphenol | 105-67-9 | 0.036 | NA |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Toluene | 108-88-3 | 0.08 | 10 |
| | | Xylenes-mixed isomers(sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Nickel | 7440-02-0 | NA | 11 mg/L TCLP |
| K060 | Ammonia still lime sludge from coking operations. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|--|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| K061 | Emission control dust/sludge from the primary production of steel in electric furnaces. | Antimony | 7440-36-0 | NA | 1.15 mg/L TCLP |
| | | Arsenic | 7440-38-2 | NA | 5.0 mg/L TCLP |
| | | Barium | 7440-39-3 | NA | 21 mg/L TCLP |
| | | Beryllium | 7440-41-7 | NA | 1.22 mg/L TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Mercury | 7439-97-6 | NA | 0.025 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Selenium | 7782-49-2 | NA | 5.7 mg/L TCLP |
| | | Silver | 7440-22-4 | NA | 0.14 mg/L TCLP |
| | | Thallium | 7440-28-0 | NA | 0.20 mg/L TCLP |
| Zinc | 7440-66-6 | NA | 4.3 mg/L TCLP | | |
| K062 | Spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry (SIC Codes 331 and 332). | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | NA |
| K069 | Emission control dust/sludge from secondary lead smelting. – Calcium Sulfate (Low Lead) Subcategory | Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP | |
| | Emission control dust/sludge from secondary lead smelting. – Non-Calcium Sulfate (High Lead) Subcategory | NA | NA | NA | RLEAD |
| K071 | K071 (Brine purification muds from the mercury cell process in chlorine production, where separately pre-purified brine is not used) nonwastewaters that are residues from RMERC. | Mercury | 7439-97-6 | NA | 0.20 mg/L TCLP |
| | K071 (Brine purification muds from the mercury cell process in chlorine production, where separately pre-purified brine is not used.) nonwastewaters that are not residues from RMERC. | Mercury | 7439-97-6 | NA | 0.025 mg/L TCLP |
| | All K071 wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| K073 | Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production. | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| K083 | Distillation bottoms from aniline production. | Aniline | 62-53-3 | 0.81 | 14 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Cyclohexanone | 108-94-1 | 0.36 | NA |
| | | Diphenylamine (difficult to distinguish from diphenylnitrosamine) | 122-39-4 | 0.92 | 13 |
| | | Diphenylnitrosamine (difficult to distinguish from diphenylamine) | 86-30-6 | 0.92 | 13 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|-----------------------|--|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| K084 | Wastewater treatment sludges generated during the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| K085 | Distillation or fractionation column bottoms from the production of chlorobenzenes. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Total PCBs(sum of all PCB isomers, or all Aroclors) | 1336-36-3 | 0.10 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| K086 | Solvent wastes and sludges, caustic washes and sludges, or water washes and sludges from cleaning tubs and equipment used in the formulation of ink from pigments, driers, soaps and stabilizers containing chromium and lead. | Acetone | 67-64-1 | 0.28 | 160 |
| | | Acetophenone | 96-86-2 | 0.010 | 9.7 |
| | | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| | | n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |
| | | Butylbenzyl phthalate | 85-68-7 | 0.017 | 28 |
| | | Cyclohexanone | 108-94-1 | 0.36 | NA |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | Diethyl phthalate | 84-66-2 | 0.20 | 28 |
| | | Dimethyl phthalate | 131-11-3 | 0.047 | 28 |
| | | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| | | Di-n-octyl phthalate | 117-84-0 | 0.017 | 28 |
| | | Ethyl acetate | 141-78-6 | 0.34 | 33 |
| | | Ethylbenzene | 100-41-4 | 0.057 | 10 |
| | | Methanol | 67-56-1 | 5.6 | NA |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 | | |
| Trichloroethylene | 79-01-6 | 0.054 | 6.0 | | |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Xylenes—mixed isomers(sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K087 | Decanter tank tar sludge from coking operations. | Acenaphthylene | 208-96-8 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes—mixed isomers(sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K088 | Spent potliners from primary aluminum reduction. | Acenaphthalene | 83-32-9 | 0.059 | 3.4 |
| | | Anthracene | 120-12-7 | 0.059 | 3.4 |
| | | Benzo(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene | 207-08-9 | 0.11 | 6.8 |
| | | Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 1.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| | | Indeno(1,2,3-c,d)pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Antimony | 7440-36-0 | 1.9 | 1.15 mg/L TCLP |
| | | Arsenic | 7440-38-2 | 1.4 | 26.1 mg/kg |
| | | Barium | 7440-39-3 | 1.2 | 21 mg/L TCLP |
| | | Beryllium | 7440-41-7 | 0.82 | 1.22 mg/L TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Mercury | 7439-97-6 | 0.15 | 0.025 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| Selenium | 7782-49-2 | 0.82 | 5.7 mg/L TCLP | | |
| Silver | 7440-22-4 | 0.43 | 0.14 mg/L TCLP | | |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|--|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Cyanide (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanide (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Fluoride | 16984-48-8 | 35 | NA |
| K093 | Distillation light ends from the production of phthalic anhydride from ortho-xylene. | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| K094 | Distillation bottoms from the production of phthalic anhydride from ortho-xylene. | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| K095 | Distillation bottoms from the production of 1,1,1-trichloroethane. | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| | | Pentachloroethane | 76-01-7 | 0.055 | 6.0 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| K096 | Heavy ends from the heavy ends column from the production of 1,1,1-trichloroethane. | m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| | | Pentachloroethane | 76-01-7 | 0.055 | 6.0 |
| | | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-6 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| | | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| | | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| K097 | Vacuum stripper discharge from the chlordane chlorinator in the production of chlordane. | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| | | Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| | | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| K098 | Untreated process wastewater from the production of toxaphene. | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| K099 | Untreated wastewater from the production of 2,4-D. | 2,4-Dichlorophenoxyacetic acid | 94-75-7 | 0.72 | 10 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|--|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| | | TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| | | TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| K100 | Waste leaching solution from acid leaching of emission control dust/sludge from secondary lead smelting. | Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| | | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K101 | Distillation tar residues from the distillation of aniline-based compounds in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | o-Nitroaniline | 88-74-4 | 0.27 | 14 |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | NA |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Mercury | 7439-97-6 | 0.15 | NA |
| K102 | Residue from the use of activated carbon for decolorization in the production of veterinary pharmaceuticals from arsenic or organo-arsenic compounds. | o-Nitrophenol | 88-75-5 | 0.028 | 13 |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | NA |
| | | Lead | 7439-92-1 | 0.69 | NA |
| | | Mercury | 7439-97-6 | 0.15 | NA |
| K103 | Process residues from aniline extraction from the production of aniline. | Aniline | 62-53-3 | 0.81 | 14 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| K104 | Combined wastewater streams generated from nitrobenzene/ aniline production. | Aniline | 62-53-3 | 0.81 | 14 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| | | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| K105 | Separated aqueous stream from the reactor product washing step in the production of chlorobenzenes. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|--|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| K106 | K106 (wastewater treatment sludge from the mercury cell process in chlorine production) nonwastewaters that contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | RMERC |
| | K106 (wastewater treatment sludge from the mercury cell process in chlorine production) nonwastewaters that contain less than 260 mg/kg total mercury that are residues from RMERC. | Mercury | 7439-97-6 | NA | 0.20 mg/L TCLP |
| | Other K106 nonwastewaters that contain less than 260 mg/kg total mercury and are not residues from RMERC. | Mercury | 7439-97-6 | NA | 0.025 mg/L TCLP |
| | All K106 wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| K107 | Column bottoms from product separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K108 | Condensed column overheads from product separation and condensed reactor vent gases from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K109 | Spent filter cartridges from product purification from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K110 | Condensed column overheads from intermediate separation from the production of 1,1-dimethylhydrazine (UDMH) from carboxylic acid hydrazides. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K111 | Product washwaters from the production of dinitrotoluene via nitration of toluene | 2,4-Dinitrotoluene | 121-1-2 | 0.32 | 140 |
| | | 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 28 |
| K112 | Reaction by-product water from the drying column in the production of toluenediamine via hydrogenation of dinitrotoluene. | NA | NA | CMBST; or CHOXD fb CARBN; or BIODG fb CARBN | CMBST |
| K113 | Condensed liquid light ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | NA | NA | CARBN; OR CMBST | CMBST |
| K114 | Vicinals from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | NA | NA | CARBN; or CMBST | CMBST |
| K115 | Heavy ends from the purification of toluenediamine in the production of toluenediamine via hydrogenation of dinitrotoluene. | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | NA | NA | CARBN; or CMBST | CMBST |
| K116 | Organic condensate from the solvent recovery column in the production of toluene diisocyanate via phosphorylation of toluenediamine. | NA | NA | CARBN; or CMBST | CMBST |
| K117 | Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| K118 | Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| K123 | Process wastewater (including supernates, filtrates and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |
| K124 | Reactor vent scrubber water from the production of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |
| K125 | Filtration, evaporation and centrifugation solids from the production of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |
| K126 | Baghouse dust and floor sweepings in milling and packaging operations from the production or formulation of ethylenebisdithiocarbamic acid and its salts. | NA | NA | CMBST; or CHOXD fb (BIODG or CARBN) | CMBST |
| K131 | Wastewater from the reactor and spent sulfuric acid from the acid dryer from the production of methyl bromide. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| K132 | Spent absorbent and wastewater separator solids from the production of methyl bromide. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| K136 | Still bottoms from the purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene. | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| K141 | Process residues from the recovery of coal tar, including, but not limited to, collecting sump residues from the production of coke or the recovery of coke by-products produced from coal. This listing does not include K087 (decanter tank tar sludge from coking operations). | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-2-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| K142 | Tar storage tank residues from the production of coke from coal or from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|--|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| K143 | Process residues from the recovery of light oil, including, but not limited to, those generated in stills, decanters and wash oil recovery units from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| K144 | Wastewater sump residues from light oil refining, including, but not limited to, intercepting or contamination sump sludges from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| K145 | Residues from naphthalene collection and recovery operations from the recovery of coke by-products produced from coal. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| K147 | Tar storage tank residues from coal tar refining. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|--|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| K148 | Residues from coal tar distillation, including, but not limited to, still bottoms. | Benzo(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| | | Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| | | Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Indeno(1,2,3-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| K149 | Distillation bottoms from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides and compounds with mixtures of these functional groups. (This waste does not include still bottoms from the distillations of benzyl chloride.) | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Chloromethane | 74-87-3 | 0.19 | 30 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| K150 | Organic residuals, excluding spent carbon adsorbent, from the spent chlorine gas and hydrochloric acid recovery processes associated with the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides and compounds with mixtures of these functional groups. | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Chloromethane | 74-87-3 | 0.19 | 30 |
| | | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.057 | 6.0 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|---------------|--|---------------------------------|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| K151 | Wastewater treatment sludges, excluding neutralization and biological sludges, generated during the treatment of wastewaters from the production of alpha- (or methyl-) chlorinated toluenes, ring-chlorinated toluenes, benzoyl chlorides and compounds with mixtures of these functional groups. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| | | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| | | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| | | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| K156 | Organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates and decantates) from the production of carbamates and carbamoyl oximes. ¹⁰ | Acetonitrile | 75-05-8 | 5.6 | 18 |
| | | Acetophenone | 96-86-2 | 0.010 | 9.7 |
| | | Aniline | 62-53-3 | 0.81 | 14 |
| | | Benomyl | 17804-35-2 | 0.056 | 1.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Carbaryl | 63-25-2 | 0.006 | 0.14 |
| | | Carbenzadim | 10605-21-7 | 0.056 | 1.4 |
| | | Carbofuran | 1563-66-2 | 0.006 | 0.14 |
| | | Carbosulfan | 55285-14-8 | 0.028 | 1.4 |
| | | Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| | | Methomyl | 16752-77-5 | 0.028 | 0.14 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| | | Pyridine | 110-86-1 | 0.014 | 16 |
| Toluene | 108-88-3 | 0.080 | 10 | | |
| Triethylamine | 121-44-8 | 0.081 | 1.5 | | |
| K157 | Wastewaters (including scrubber waters, condenser waters, washwaters, and separation waters) from the production of carbamates and carbamoyl oximes. ¹⁰ | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Chloromethane | 74-87-3 | 0.19 | 30 |
| | | Methomyl | 16752-77-5 | 0.028 | 0.14 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| | | Pyridine | 110-86-1 | 0.014 | 16 |
| Triethylamine | 121-44-8 | 0.081 | 1.5 | | |
| K158 | Bag house dusts and filter/separation solids from the production of carbamates and carbamoyl oximes. | Benomyl | 17804-35-2 | 0.056 | 1.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Carbenzadim | 10605-21-7 | 0.056 | 1.4 |
| | | Carbofuran | 1563-66-2 | 0.006 | 0.14 |
| | | Carbosulfan | 55285-14-8 | 0.028 | 1.4 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|--|---------------------------------|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | Chloroform | 67-66-3 | 0.046 | 6.0 |
| | | Methylene chloride | 75-09-2 | 0.089 | 30 |
| | | Phenol | 108-95-2 | 0.039 | 6.2 |
| K159 | Organics from the treatment of thiocarbamate wastes. | Benzene | 71-43-2 | 0.14 | 10 |
| | | Butylate | 2008-41-5 | 0.042 | 1.4 |
| | | EPTC (Eptam) | 759-94-4 | 0.042 | 1.4 |
| | | Molinate | 2212-67-1 | 0.042 | 1.4 |
| | | Pebulate | 1114-71-2 | 0.042 | 1.4 |
| | | Vernolate | 1929-77-7 | 0.042 | 1.4 |
| | | | | | |
| K161 | Purification solids (including filtration, evaporation and centrifugation solids), baghouse dust and floor sweepings from the production of dithiocarbamate acids and their salts. | Antimony | 7440-36-0 | 1.9 | 1.15 mg/L TCLP |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Carbon disulfide | 75-15-0 | 3.8 | 4.8 mg/L TCLP |
| | | Dithiocarbamates (total) | NA | 0.028 | 28 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| | | Selenium | 7782-49-2 | 0.82 | 5.7 mg/L TCLP |
| K169 | Crude oil tank sediment from petroleum refining operations. | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 1.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Ethyl benzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 81-05-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene (Methyl Benzene) | 108-88-3 | 0.080 | 10 |
| | | Xylene(s) (Total) | 1330-20-7 | 0.32 | 30 |
| | | | | | |
| K170 | Clarified slurry oil sediment from petroleum refining operations. | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 1.8 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| | | Ethyl benzene | 100-41-4 | 0.057 | 10 |
| | | Fluorene | 86-73-7 | 0.059 | 3.4 |
| | | Indeno(1,2,3,-cd)pyrene | 193-39-5 | 0.0055 | 3.4 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 81-05-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene (Methyl Benzene) | 108-88-3 | 0.080 | 10 |
| | | Xylene(s) (Total) | 1330-20-7 | 0.32 | 30 |
| | | | | | |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|--|--|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| K171 | Spent hydrotreating catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media). | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| | | Benzene | 71-43-2 | 0.14 | 10 |
| | | Chrysene | 218-01-9 | 0.059 | 3.4 |
| | | Ethyl benzene | 100-41-4 | 0.057 | 10 |
| | | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Phenanthrene | 81-05-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene (Methyl Benzene) | 108-88-3 | 0.080 | 10 |
| | | Xylene(s) (Total) | 1330-20-7 | 0.32 | 30 |
| | | Arsenic | 7740-38-2 | 1.4 | 5. mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11.0 mg/L TCLP |
| | | Vanadium | 7440-62-2 | 4.3 | 1.6 mg/L TCLP |
| | | Reactive sulfides | NA | DEACT | DEACT |
| K172 | Spent hydrorefining catalyst from petroleum refining operations, including guard beds used to desulfurize feeds to other catalytic reactors (this listing does not include inert support media). | Benzene | 71-43-2 | 0.14 | 10 |
| | | Ethyl benzene | 100-41-4 | 0.057 | 10 |
| | | Toluene (Methyl Benzene) | 108-88-3 | 0.080 | 10 |
| | | Xylene(s) (Total) | 1330-20-7 | 0.32 | 30 |
| | | Antimony | 7740-36-0 | 1.9 | 1.15 mg/L TCLP |
| | | Arsenic | 7740-38-2 | 1.4 | 5. mg/L TCLP |
| | | Nickel | 7440-02-0 | 3.98 | 11.0 mg/L TCLP |
| | | Vanadium | 7440-62-2 | 4.3 | 1.6 mg/L TCLP |
| | | Reactive Sulfides | NA | DEACT | DEACT |
| K174 | Wastewater treatment sludges from the production of ethylene dichloride or vinyl chloride monomer. | 1, 2, 3, 4, 6, 7, 8-Heptachloro-dibenzo-p-dioxin (1, 2, 3, 4, 6, 7, 8 HpCDD) | 35822-46-9 | 0.000035 or CMBST ¹¹ | 0.0025 or CMBST ¹¹ |
| | | 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF) | 67562-39-4 | 0.000035 or CMBST ¹¹ | 0.0025 or CMBST ¹¹ |
| | | 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF) | 55673-89-7 | 0.000035 or CMBST ¹¹ | 0.0025 or CMBST ¹¹ |
| | | HxCDDs (All Hexachlorodibenzo-p-dioxins) | 34465-46-8 | 0.000063 or CMBST ¹¹ | 0.001 or CMBST ¹¹ |
| | | HxCDFs (All Hexachlorodibenzofurans) | 55684-94-1 | 0.000063 or CMBST ¹¹ | 0.001 or CMBST ¹¹ |
| | | 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) | 3268-87-9 | 0.000063 or CMBST ¹¹ | 0.005 or CMBST ¹¹ |
| | | 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF) | 39001-02-0 | 0.000063 or CMBST ¹¹ | 0.005 or CMBST ¹¹ |
| | | PeCDDs (All Pentachlorodibenzo-p-dioxins) | 36088-22-9 | 0.000063 or CMBST ¹¹ | 0.001 or CMBST ¹¹ |
| | | PeCDFs (All Pentachlorodibenzofurans) | 30402-15-4 | 0.000035 or CMBST ¹¹ | 0.001 or CMBST ¹¹ |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | TCDDs (All tetrachlorodibenzo- <i>p</i> -dioxins) | 41903-57-5 | 0.000063 or CMBST ¹¹ | 0.001 or CMBST ¹¹ |
| | | TCDFs (All tetrachlorodibenzofurans) | 55722-27-5 | 0.000063 or CMBST ¹¹ | 0.001 or CMBST ¹¹ |
| | | Arsenic | 7440-36-0 | 1.4 | 5.0mg/L TCLP |
| K175 | Wastewater treatment sludge from the production of vinyl chloride monomer using mercuric chloride catalyst in an acetylene-based process. | Mercury ¹² | 7438-97-6 | NA | 0.025 mg/L TCLP |
| | | pH ¹² | | NA | pH≤6.0 |
| | All K175 wastewaters | Mercury | 7438-97-6 | 0.15 | NA |
| K176 | Baghouse filters from the production of antimony oxide, including filters from the production of intermediates (e.g., antimony metal or crude antimony oxide). | Antimony | 7440-36-0 | 1.9 | 1.15 mg/L TCLP |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| | | Mercury | 7439-97-6 | 0.15 | 0.025 mg/L TCLP |
| K177 | Slag from the production of antimony oxide that is speculatively accumulated or disposed, including slag from the production of intermediates (e.g., antimony metal or crude antimony oxide). | Antimony | 7440-36-0 | 1.9 | 1.15 mg/L TCLP |
| | | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| K178 | Residues from manufacturing and manufacturing-site storage of ferric chloride from acids formed during the production of titanium dioxide using the chloride-ilmenite process. | 1,2,3,4,6,7,8-Heptachlorodibenzo- <i>p</i> -dioxin (1,2,3,4,6,7,8-HpC-DD) | 35822-39-4 | 0.000035 or CMBST ¹¹ | 0.0025 or CMBST ¹¹ |
| | | 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpC-DF) | 67562-39-4 | 0.000035 or CMBST ¹¹ | 0.0025 or CMBST ¹¹ |
| | | 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpC-DF) | 55673-89-7 | 0.000035 or CMBST ¹¹ | 0.0025 or CMBST ¹¹ |
| | | HxCDDs (All Hexachlorodibenzo- <i>p</i> -dioxins) | 34465-46-8 | 0.000063 or CMBST ¹¹ | 0.001 or CMBST ¹¹ |
| | | HxCDFs (All Hexachlorodibenzofurans) | 55684-94-1 | 0.000063 or CMBST ¹¹ | 0.001 or CMBST ¹¹ |
| | | 1,2,3,4,6,7,8,9-Octachlorodibenzo- <i>p</i> -dioxin (OCDD) | 3268-87-9 | 0.000063 or CMBST ¹¹ | 0.005 or CMBST ¹¹ |
| | | 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF) | 39001-02-0 | 0.000063 or CMBST ¹¹ | 0.005 or CMBST ¹¹ |
| | | PeCDDs (All Pentachlorodibenzo- <i>p</i> -dioxins) | 36088-22-9 | 0.000063 or CMBST ¹¹ | 0.001 or CMBST ¹¹ |
| | | PeCDFs (All Pentachlorodibenzofurans) | 30402-15-4 | 0.000035 or CMBST ¹¹ | 0.001 or CMBST ¹¹ |
| | | TCDDs (All tetrachlorodibenzo- <i>p</i> -dioxins) | 41903-57-5 | 0.000063 or CMBST ¹¹ | 0.001 or CMBST ¹¹ |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|--|---|---|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| | | TCDFs (All tetrachlorodibenzofurans) | 55722-27-5 | 0.000063 or CMBST ¹¹ | 0.001 or CMBST ¹¹ |
| | | Thallium | 7440-28-0 | 1.4 | 0.20 mg/L TCLP |
| K181 | Nonwastewaters from the production of dyes or pigments (including nonwastewaters commingled at the point of generation with nonwastewaters from other processes) that, at the point of generation, contain mass loadings of any of the constituents identified in sub. (3) of NR 661.32 that are equal to or greater than the corresponding sub. (3) levels, as determined on a calendar year basis. | Aniline o-Anisidine (2-methoxyaniline) 4-Chloroaniline p-Cresidine 2,4-Dimethylaniline (2,4-xylylidine) 1,2-Phenylenediamine | 62-53-3 90-04-0 106-47-8 120-71-8 95-68-1 | 0.81 0.010 0.46 0.010 0.010 | 14 0.66 16 0.66 0.66 |
| | | 1,3-Phenylenediamine | 95-54-5 108-45-2 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN 0.010 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN 0.66 |
| P001 | Warfarin, & salts, when present at concentrations greater than 0.3% | Warfarin | 81-81-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P002 | 1-Acetyl-2-thiourea | 1-Acetyl-2-thiourea | 591-08-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P003 | Acrolein | Acrolein | 107-02-8 | 0.29 | CMBST |
| P004 | Aldrin | Aldrin | 309-00-2 | 0.021 | 0.066 |
| P005 | Allyl alcohol | Allyl alcohol | 107-18-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P006 | Aluminum phosphide | Aluminum phosphide | 20859-73-8 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| P007 | 5-Aminomethyl 3-isoxazolol | 5-Aminomethyl 3-isoxazolol | 2763-96-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P008 | 4-Aminopyridine | 4-Aminopyridine | 504-24-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P009 | Ammonium picrate | Ammonium picrate | 131-74-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| P010 | Arsenic acid | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| P011 | Arsenic pentoxide | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| P012 | Arsenic trioxide | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| P013 | Barium cyanide | Barium | 7440-39-3 | NA | 21 mg/L TCLP |
| | | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P014 | Thiophenol (Benzene thiol) | Thiophenol (Benzene thiol) | 108-98-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| P015 | Beryllium dust | Beryllium | 7440-41-7 | RMETL; or RTHRM | RMETL; or RTHRM |
| P016 | Dichloromethyl ether (Bis(chloromethyl)ether) | Dichloromethyl ether | 542-88-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P017 | Bromoacetone | Bromoacetone | 598-31-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P018 | Brucine | Brucine | 357-57-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P020 | 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | 2-sec-Butyl-4,6-dinitrophenol (Dinoseb) | 88-85-7 | 0.066 | 2.5 |
| P021 | Calcium cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P022 | Carbon disulfide | Carbon disulfide | 75-15-0 | 3.8 | CMBST |
| | | Carbon disulfide; alternate ⁶ standard for nonwastewaters only | 75-15-0 | NA | 4.8 mg/L TCLP |
| P023 | Chloroacetaldehyde | Chloroacetaldehyde | 107-20-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P024 | p-Chloroaniline | p-Chloroaniline | 106-47-8 | 0.46 | 16 |
| P026 | 1-(o-Chlorophenyl)thiourea | 1-(o-Chlorophenyl)thiourea | 5344-82-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P027 | 3-Chloropropionitrile | 3-Chloropropionitrile | 542-76-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P028 | Benzyl chloride | Benzyl chloride | 100-44-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P029 | Copper cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P030 | Cyanides (soluble salts and complexes) | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P031 | Cyanogen | Cyanogen | 460-19-5 | CHOXD; WETOX; or CMBST | CHOXD; WETOX; or CMBST |
| P033 | Cyanogen chloride | Cyanogen chloride | 506-77-4 | CHOXD; WETOX; or CMBST | CHOXD; WETOX; or CMBST |
| P034 | 2-Cyclohexyl-4,6-dinitrophenol | 2-Cyclohexyl-4,6-dinitrophenol | 131-89-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P036 | Dichlorophenylarsine | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| P037 | Dieldrin | Dieldrin | 60-57-1 | 0.017 | 0.13 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|--|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| P038 | Diethylarsine | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| P039 | Disulfoton | Disulfoton | 298-04-4 | 0.017 | 6.2 |
| P040 | 0,0-Diethyl O-pyrazinyl phosphorothioate | 0,0-Diethyl O-pyrazinyl phosphorothioate | 297-97-2 | CARBN; or CMBST | CMBST |
| P041 | Diethyl-p-nitrophenyl phosphate | Diethyl-p-nitrophenyl phosphate | 311-45-5 | CARBN; or CMBST | CMBST |
| P042 | Epinephrine | Epinephrine | 51-43-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P043 | Diisopropylfluorophosphate (DFP) | Diisopropylfluorophosphate (DFP) | 55-91-4 | CARBN; or CMBST | CMBST |
| P044 | Dimethoate | Dimethoate | 60-51-5 | CARBN; or CMBST | CMBST |
| P045 | Thiofanox | Thiofanox | 39196-18-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P046 | alpha, alpha-Dimethylphenethylamine | alpha, alpha-Dimethylphenethylamine | 122-09-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P047 | 4,6-Dinitro-o-cresol | 4,6-Dinitro-o-cresol | 543-52-1 | 0.28 | 160 |
| | 4,6-Dinitro-o-cresol salts | NA | NA | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P048 | 2,4-Dinitrophenol | 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| P049 | Dithiobiuret | Dithiobiuret | 541-53-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P050 | Endosulfan | Endosulfan I | 939-98-8 | 0.023 | 0.066 |
| | | Endosulfan II | 33213-6-5 | 0.029 | 0.13 |
| | | Endosulfan sulfate | 1031-07-8 | 0.029 | 0.13 |
| P051 | Endrin | Endrin | 72-20-8 | 0.0028 | 0.13 |
| | | Endrin aldehyde | 7421-93-4 | 0.025 | 0.13 |
| P054 | Aziridine | Aziridine | 151-56-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P056 | Fluorine | Fluoride (measured in wastewaters only) | 16964-48-8 | 35 | ADGAS fb NEUTR |
| P057 | Fluoroacetamide | Fluoroacetamide | 640-19-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P058 | Fluoroacetic acid, sodium salt | Fluoroacetic acid, sodium salt | 62-74-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P059 | Heptachlor | Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| | | Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| P060 | Isodrin | Isodrin | 465-73-6 | 0.021 | 0.066 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|----------------------------------|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| P062 | Hexaethyl tetraphosphate | Hexaethyl tetraphosphate | 757-58-4 | CARBN; or CMBST | CMBST |
| P063 | Hydrogen cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P064 | Isocyanic acid, ethyl ester | Isocyanic acid, ethyl ester | 624-83-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P065 | Mercury fulminate nonwastewaters, regardless of their total mercury content, that are not incinerator residues or are not residues from RMERC. | Mercury | 7439-97-6 | NA | IMERC |
| | Mercury fulminate nonwastewaters that are either incinerator residues or are residues from RMERC; and contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | RMERC |
| | Mercury fulminate nonwastewaters that are residues from RMERC and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.20 mg/L TCLP |
| | Mercury fulminate nonwastewaters that are incinerator residues and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.025 mg/L TCLP |
| | All mercury fulminate wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| P066 | Methomyl | Methomyl | 16752-77-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P067 | 2-Methyl-aziridine | 2-Methyl-aziridine | 75-55-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P068 | Methyl hydrazine | Methyl hydrazine | 60-34-4 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| P069 | 2-Methyl-lactonitrile | 2-Methyl-lactonitrile | 75-86-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P070 | Aldicarb | Aldicarb | 116-06-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P071 | Methyl parathion | Methyl parathion | 298-00-0 | 0.014 | 4.6 |
| P072 | 1-Naphthyl-2-thiourea | 1-Naphthyl-2-thiourea | 86-88-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P073 | Nickel carbonyl | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| P074 | Nickel cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Nickel | 7440-02-0 | 3.98 | 11 mg/L TCLP |
| P075 | Nicotine and salts | Nicotine and salts | 54-11-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P076 | Nitric oxide | Nitric oxide | 10102-43-9 | ADGAS | ADGAS |
| P077 | p-Nitroaniline | p-Nitroaniline | 100-01-6 | 0.028 | 28 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|----------------------------------|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| P078 | Nitrogen dioxide | Nitrogen dioxide | 10102-44-0 | ADGAS | ADGAS |
| P081 | Nitroglycerin | Nitroglycerin | 55-63-0 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| P082 | N-Nitrosodimethylamine | N-Nitrosodimethylamine | 62-75-9 | 0.40 | 2.3 |
| P084 | N-Nitrosomethylvinylamine | N-Nitrosomethylvinylamine | 4549-40-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P085 | Octamethylpyrophosphoramidate | Octamethylpyrophosphoramidate | 152-16-9 | CARBN; or CMBST | CMBST |
| P087 | Osmium tetroxide | Osmium tetroxide | 20816-12-0 | RMETL; or RTHRM | RMETL; or RTHRM |
| P088 | Endothall | Endothall | 145-73-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P089 | Parathion | Parathion | 56-38-2 | 0.014 | 4.6 |
| P092 | Phenyl mercuric acetate nonwastewaters, regardless of their total mercury content, that are not incinerator residues or are not residues from RMERC. | Mercury | 7439-97-6 | NA | IMERC; or RMERC |
| | Phenyl mercuric acetate nonwastewaters that are either incinerator residues or are residues from RMERC; and still contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | RMERC |
| | Phenyl mercuric acetate nonwastewaters that are residues from RMERC and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.20 mg/L TCLP |
| | Phenyl mercuric acetate nonwastewaters that are incinerator residues and contain less than 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | 0.025 mg/L TCLP |
| | All phenyl mercuric acetate wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| P093 | Phenylthiourea | Phenylthiourea | 103-85-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P094 | Phorate | Phorate | 298-02-2 | 0.021 | 4.6 |
| P095 | Phosgene | Phosgene | 75-44-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P096 | Phosphine | Phosphine | 7803-51-2 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| P097 | Famphur | Famphur | 52-85-7 | 0.017 | 15 |
| P098 | Potassium cyanide. | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P099 | Potassium silver cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Silver | 7440-22-4 | 0.43 | 0.14 mg/L TCLP |
| P101 | Ethyl cyanide (Propanenitrile) | Ethyl cyanide (Propanenitrile) | 107-12-0 | 0.24 | 360 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| P102 | Propargyl alcohol | Propargyl alcohol | 107-19-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P103 | Selenourea | Selenium | 7782-49-2 | 0.82 | 5.7 mg/L TCLP |
| P104 | Silver cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| | | Silver | 7440-22-4 | 0.43 | 0.14 mg/L TCLP |
| P105 | Sodium azide | Sodium azide | 26628-22-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| P106 | Sodium cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P108 | Strychnine and salts | Strychnine and salts | 57-24-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P109 | Tetraethyldithiopyrophosphate | Tetraethyldithiopyrophosphate | 3689-24-5 | CARBN; or CMBST | CMBST |
| P110 | Tetraethyl lead | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| P111 | Tetraethylpyrophosphate | Tetraethylpyrophosphate | 107-49-3 | CARBN; or CMBST | CMBST |
| P112 | Tetranitromethane | Tetranitromethane | 509-14-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| P113 | Thallic oxide | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| P114 | Thallium selenite | Selenium | 7782-49-2 | 0.82 | 5.7 mg/L TCLP |
| P115 | Thallium (I) sulfate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| P116 | Thiosemicarbazide | Thiosemicarbazide | 79-19-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P118 | Trichloromethanethiol | Trichloromethanethiol | 75-70-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| P119 | Ammonium vanadate | Vanadium (measured in wastewaters only) | 7440-62-2 | 4.3 | STABL |
| P120 | Vanadium pentoxide | Vanadium (measured in wastewaters only) | 7440-62-2 | 4.3 | STABL |
| P121 | Zinc cyanide | Cyanides (Total) ⁷ | 57-12-5 | 1.2 | 590 |
| | | Cyanides (Amenable) ⁷ | 57-12-5 | 0.86 | 30 |
| P122 | Zinc phosphide Zn ₃ P ₂ , when present at concentrations greater than 10% | Zinc Phosphide | 1314-84-7 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| P123 | Toxaphene | Toxaphene | 8001-35-2 | 0.0095 | 2.6 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| P127 | Carbofuran | Carbofuran | 1563-66-2 | 0.006 | 0.14 |
| P128 | Mexacarbate | Mexacarbate | 315-18-4 | 0.056 | 1.4 |
| P185 | Tirpate ¹⁰ | Tirpate | 26419-73-8 | 0.056 | 0.28 |
| P188 | Physostigmine salicylate | Physostigmine salicylate | 57-64-7 | 0.056 | 1.4 |
| P189 | Carbosulfan | Carbosulfan | 55285-14-8 | 0.028 | 1.4 |
| P190 | Metolcarb | Metolcarb | 1129-41-5 | 0.056 | 1.4 |
| P191 | Dimetilan ¹⁰ | Dimetilan | 644-64-4 | 0.056 | 1.4 |
| P192 | Isolan ¹⁰ | Isolan | 119-38-0 | 0.056 | 1.4 |
| P194 | Oxamyl | Oxamyl | 23135-22-0 | 0.056 | 0.28 |
| P196 | Manganese dimethyldithiocarbamate ¹⁰ | Dithiocarbamates (total) | NA | 0.028 | 28 |
| P197 | Formparanate ¹⁰ | Formparanate | 17702-57-7 | 0.056 | 1.4 |
| P198 | Formetanate hydrochloride | Formetanate hydrochloride | 23422-53-9 | 0.056 | 1.4 |
| P199 | Methiocarb | Methiocarb | 2032-65-7 | 0.056 | 1.4 |
| P201 | Promecarb | Promecarb | 2631-37-0 | 0.056 | 1.4 |
| P202 | m-Cumenyl methylcarbamate | m-Cumenyl methylcarbamate | 64-00-6 | 0.056 | 1.4 |
| P203 | Aldicarb sulfone | Aldicarb sulfone | 1646-88-4 | 0.056 | 0.28 |
| P204 | Physostigmine | Physostigmine | 57-47-6 | 0.056 | 1.4 |
| P205 | Ziram | Dithiocarbamates (total) | NA | 0.028 | 28 |
| U001 | Acetaldehyde | Acetaldehyde | 75-07-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U002 | Acetone | Acetone | 67-64-1 | 0.28 | 160 |
| U003 | Acetonitrile | Acetonitrile | 75-05-8 | 5.6 | CMBST |
| | | Acetonitrile; alternate ⁶ standard for nonwastewaters only | 75-05-8 | NA | 38 |
| U004 | Acetophenone | Acetophenone | 98-86-2 | 0.010 | 9.7 |
| U005 | 2-Acetylaminofluorene | 2-Acetylaminofluorene | 53-96-3 | 0.059 | 140 |
| U006 | Acetyl chloride | Acetyl Chloride | 75-36-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U007 | Acrylamide | Acrylamide | 79-06-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U008 | Acrylic acid | Acrylic acid | 79-10-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U009 | Acrylonitrile | Acrylonitrile | 107-13-1 | 0.24 | 84 |
| U010 | Mitomycin C | Mitomycin C | 50-07-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---------------------------------|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| U011 | Amitrole | Amitrole | 61-82-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U012 | Aniline | Aniline | 62-53-3 | 0.81 | 14 |
| U014 | Auramine | Auramine | 492-80-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U015 | Azaserine | Azaserine | 115-02-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U016 | Benz(c)acridine | Benz(c)acridine | 225-51-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U017 | Benzal chloride | Benzal chloride | 98-87-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U018 | Benz(a)anthracene | Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| U019 | Benzene | Benzene | 71-43-2 | 0.14 | 10 |
| U020 | Benzenesulfonyl chloride | Benzenesulfonyl chloride | 98-09-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U021 | Benzidine | Benzidine | 92-87-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U022 | Benzo(a)pyrene | Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| U023 | Benzotrichloride | Benzotrichloride | 98-07-7 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U024 | bis(2-Chloroethoxy)methane | bis(2-Chloroethoxy)methane | 111-91-1 | 0.036 | 7.2 |
| U025 | bis(2-Chloroethyl)ether | bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| U026 | Chlornaphazine | Chlornaphazine | 494-03-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U027 | bis(2-Chloroisopropyl)ether | bis(2-Chloroisopropyl)ether | 39638-32-9 | 0.055 | 7.2 |
| U028 | bis(2-Ethylhexyl) phthalate | bis(2-Ethylhexyl) phthalate | 117-81-7 | 0.28 | 28 |
| U029 | Methyl bromide (Bromomethane) | Methyl bromide (Bromomethane) | 74-83-9 | 0.11 | 15 |
| U030 | 4-Bromophenyl phenyl ether | 4-Bromophenyl phenyl ether | 101-55-3 | 0.055 | 15 |
| U031 | n-Butyl alcohol | n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |
| U032 | Calcium chromate | Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| U033 | Carbon oxyfluoride | Carbon oxyfluoride | 353-50-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|--|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| U034 | Trichloroacetaldehyde (Chloral) | Trichloroacetaldehyde (Chloral) | 75-87-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U035 | Chlorambucil | Chlorambucil | 305-03-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U036 | Chlordane | Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| U037 | Chlorobenzene | Chlorobenzene | 108-90-7 | 0.057 | 60 |
| U038 | Chlorobenzilate | Chlorobenzilate | 510-15-6 | 0.10 | CMBST |
| U039 | p-Chloro-m-cresol | p-Chloro-m-cresol | 59-50-7 | 0.018 | 14 |
| U041 | Epichlorohydrin (1-Chloro-2,3-epoxypropane) | Epichlorohydrin (1-Chloro-2,3-epoxypropane) | 106-89-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U042 | 2-Chloroethyl vinyl ether | 2-Chloroethyl vinyl ether | 110-75-8 | 0.062 | CMBST |
| U043 | Vinyl chloride | Vinyl chloride | 75-01-4 | 0.27 | 6.0 |
| U044 | Chloroform | Chloroform | 67-66-3 | 0.046 | 6.0 |
| U045 | Chloromethane (Methyl chloride) | Chloromethane (Methyl chloride) | 74-87-3 | 0.19 | 30 |
| U046 | Chloromethyl methyl ether | Chloromethyl methyl ether | 107-30-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U047 | 2-Chloronaphthalene | 2-Chloronaphthalene | 91-58-7 | 0.055 | 5.6 |
| U048 | 2-Chlorophenol | 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| U049 | 4-Chloro-o-toluidine hydrochloride | 4-Chloro-o-toluidine hydrochloride | 3165-93-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U050 | Chrysene | Chrysene | 218-01-9 | 0.059 | 3.4 |
| U051 | Creosote | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| | | Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |
| | | Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| | | Pyrene | 129-00-0 | 0.067 | 8.2 |
| | | Toluene | 108-88-3 | 0.080 | 10 |
| | | Xylenes-mixed isomers(sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| | | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| U052 | Cresols (Cresylic acid) | o-Cresol | 95-48-7 | 0.11 | 5.6 |
| | | m-Cresol(difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| | | p-Cresol(difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| | | Cresol-mixed isomers (Cresylic acid)(sum of o-, m-, and p-cresol concentrations) | 1319-77-3 | 0.88 | 11.2 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|--|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| U053 | Crotonaldehyde | Crotonaldehyde | 4170-30-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U055 | Cumene | Cumene | 98-82-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U056 | Cyclohexane | Cyclohexane | 110-82-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U057 | Cyclohexanone | Cyclohexanone | 108-94-1 | 0.36 | CMBST |
| | | Cyclohexanone; alternate ⁶ standard for nonwastewaters only | 108-94-1 | NA | 0.75 mg/L TCLP |
| U058 | Cyclophosphamide | Cyclophosphamide | 50-18-0 | CARBN; or CMBST | CMBST |
| U059 | Daunomycin | Daunomycin | 20830-81-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U060 | DDD | o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| | | p,p'-DDD | 72-54-8 | 0.023 | 0.087 |
| U061 | DDT | o-p'-DDT | 789-02-6 | 0.0039 | 0.087 |
| | | p,p'-DDT | 50-29-3 | 0.0039 | 0.087 |
| | | o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| | | p,p'-DDD | 72-54-8 | 0.023 | 0.087 |
| | | o,p'-DDE | 3424-82-6 | 0.031 | 0.087 |
| | | p,p'-DDE | 72-55-9 | 0.031 | 0.087 |
| U062 | Diallate | Diallate | 2303-16-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U063 | Dibenz(a,h)anthracene | Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| U064 | Dibenz(a,i)pyrene | Dibenz(a,i)pyrene | 189-55-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U066 | 1,2-Dibromo-3-chloropropane | 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.11 | 15 |
| U067 | Ethylene dibromide (1,2-Dibromoethane) | Ethylene dibromide (1,2-Dibromoethane) | 106-93-4 | 0.028 | 15 |
| U068 | Dibromomethane | Dibromomethane | 74-95-3 | 0.11 | 15 |
| U069 | Di-n-butyl phthalate | Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| U070 | o-Dichlorobenzene | o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| U071 | m-Dichlorobenzene | m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| U072 | p-Dichlorobenzene | p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| U073 | 3,3'-Dichlorobenzidine | 3,3'-Dichlorobenzidine | 91-94-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|-------------------------------------|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| U074 | 1,4-Dichloro-2-butene | cis-1,4-Dichloro-2-butene | 1476-11-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | | trans-1,4-Dichloro-2-butene | 764-41-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U075 | Dichlorodifluoromethane | Dichlorodifluoromethane | 75-71-8 | 0.23 | 7.2 |
| U076 | 1,1-Dichloroethane | 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| U077 | 1,2-Dichloroethane | 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| U078 | 1,1-Dichloroethylene | 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6.0 |
| U079 | 1,2-Dichloroethylene | trans-1,2-Dichloroethylene | 156-60-5 | 0.054 | 30 |
| U080 | Methylene chloride | Methylene chloride | 75-09-2 | 0.089 | 30 |
| U081 | 2,4-Dichlorophenol | 2,4-Dichlorophenol | 120-83-2 | 0.044 | 14 |
| U082 | 2,6-Dichlorophenol | 2,6-Dichlorophenol | 87-65-0 | 0.044 | 14 |
| U083 | 1,2-Dichloropropane | 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |
| U084 | 1,3-Dichloropropylene | cis-1,3-Dichloropropylene | 10061-01-5 | 0.036 | 18 |
| | | trans-1,3-Dichloropropylene | 10061-02-6 | 0.036 | 18 |
| U085 | 1,2:3,4-Diepoxybutane | 1,2:3,4-Diepoxybutane | 1464-53-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U086 | N,N'-Diethylhydrazine | N,N'-Diethylhydrazine | 1615-80-1 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U087 | O,O-Diethyl S-methyldithiophosphate | O,O-Diethyl S-methyldithiophosphate | 3288-58-2 | CARBN; or CMBST | CMBST |
| U088 | Diethyl phthalate | Diethyl phthalate | 84-66-2 | 0.20 | 28 |
| U089 | Diethyl stilbestrol | Diethyl stilbestrol | 56-53-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U090 | Dihydrosafrole | Dihydrosafrole | 94-58-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U091 | 3,3'-Dimethoxybenzidine | 3,3'-Dimethoxybenzidine | 119-90-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U092 | Dimethylamine | Dimethylamine | 124-40-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U093 | p-Dimethylaminoazobenzene | p-Dimethylaminoazobenzene | 60-11-7 | 0.13 | CMBST |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| U094 | 7,12-Dimethylbenz(a)anthracene | 7,12-Dimethylbenz(a)anthracene | 57-97-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U095 | 3,3'-Dimethylbenzidine | 3,3'-Dimethylbenzidine | 119-93-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U096 | alpha, alpha-Dimethyl benzyl hydroperoxide | alpha, alpha-Dimethyl benzyl hydroperoxide | 80-15-9 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U097 | Dimethylcarbamoyl chloride | Dimethylcarbamoyl chloride | 79-44-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U098 | 1,1-Dimethylhydrazine | 1,1-Dimethylhydrazine | 57-14-7 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U099 | 1,2-Dimethylhydrazine | 1,2-Dimethylhydrazine | 540-73-8 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U101 | 2,4-Dimethylphenol | 2,4-Dimethylphenol | 105-67-9 | 0.036 | 14 |
| U102 | Dimethyl phthalate | Dimethyl phthalate | 131-11-3 | 0.047 | 28 |
| U103 | Dimethyl sulfate | Dimethyl sulfate | 77-78-1 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U105 | 2,4-Dinitrotoluene | 2,4-Dinitrotoluene | 121-14-2 | 0.32 | 140 |
| U106 | 2,6-Dinitrotoluene | 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 28 |
| U107 | Di-n-octyl phthalate | Di-n-octyl phthalate | 117-84-0 | 0.017 | 28 |
| U108 | 1,4-Dioxane | 1,4-Dioxane | 123-91-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | | 1,4-Dioxane; alternate ⁶ | 123-91-1 | 12.0 | 170 |
| U109 | 1,2-Diphenylhydrazine | 1,2-Diphenylhydrazine | 122-66-7 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| | | 1,2-Diphenylhydrazine; alternate ⁶ standard for wastewaters only | 122-66-7 | 0.087 | NA |
| U110 | Dipropylamine | Dipropylamine | 142-84-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U111 | Di-n-propylnitrosamine | Di-n-propylnitrosamine | 621-64-7 | 0.40 | 14 |
| U112 | Ethyl acetate | Ethyl acetate | 141-78-6 | 0.34 | 33 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|--|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| U113 | Ethyl acrylate | Ethyl acrylate | 140-88-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U114 | Ethylenebisdithiocarbamic acid salts and esters | Ethylenebisdithiocarbamic acid | 111-54-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U115 | Ethylene oxide | Ethylene oxide | 75-21-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CHOXD; or CMBST |
| | | Ethylene oxide; alternate ⁶ standard for wastewaters only | 75-21-8 | 0.12 | NA |
| U116 | Ethylene thiourea | Ethylene thiourea | 96-45-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U117 | Ethyl ether | Ethyl ether | 60-29-7 | 0.12 | 160 |
| U118 | Ethyl methacrylate | Ethyl methacrylate | 97-63-2 | 0.14 | 160 |
| U119 | Ethyl methane sulfonate | Ethyl methane sulfonate | 62-50-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U120 | Fluoranthene | Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| U121 | Trichlorofluoromethane | Trichlorofluoromethane | 75-69-4 | 0.020 | 30 |
| U122 | Formaldehyde | Formaldehyde | 50-00-0 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U123 | Formic acid | Formic acid | 64-18-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U124 | Furan | Furan | 110-00-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U125 | Furfural | Furfural | 98-01-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U126 | Glycidylaldehyde | Glycidylaldehyde | 765-34-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U127 | Hexachlorobenzene | Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| U128 | Hexachlorobutadiene | Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| U129 | Lindane | alpha-BHC | 319-84-6 | 0.00014 | 0.066 |
| | | beta-BHC | 319-85-7 | 0.00014 | 0.066 |
| | | delta-BHC | 319-86-8 | 0.023 | 0.066 |
| | | gamma-BHC (Lindane) | 58-89-9 | 0.0017 | 0.066 |
| U130 | Hexachlorocyclopentadiene | Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| U131 | Hexachloroethane | Hexachloroethane | 67-72-1 | 0.055 | 30 |
| U132 | Hexachlorophene | Hexachlorophene | 70-30-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U133 | Hydrazine | Hydrazine | 302-01-2 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U134 | Hydrogen fluoride | Fluoride (measured in wastewaters only) | 16964-48-8 | 35 | ADGAS fb NEUTR; or NEUTR |
| U135 | Hydrogen Sulfide | Hydrogen Sulfide | 7783-06-4 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST. |
| U136 | Cacodylic acid | Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| U137 | Indeno(1,2,3-c,d)pyrene | Indeno(1,2,3-c,d)pyrene | 193-39-5 | 0.0055 | 3.4 |
| U138 | Iodomethane | Iodomethane | 74-88-4 | 0.19 | 65 |
| U140 | Isobutyl alcohol | Isobutyl alcohol | 78-83-1 | 5.6 | 170 |
| U141 | Isosafrole | Isosafrole | 120-58-1 | 0.081 | 2.6 |
| U142 | Kepone | Kepone | 143-50-8 | 0.0011 | 0.13 |
| U143 | Lasiocarpine | Lasiocarpine | 303-34-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U144 | Lead acetate | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| U145 | Lead phosphate | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| U146 | Lead subacetate | Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| U147 | Maleic anhydride | Maleic anhydride | 108-31-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U148 | Maleic hydrazide | Maleic hydrazide | 123-33-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U149 | Malononitrile | Malononitrile | 109-77-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U150 | Melphalan | Melphalan | 148-82-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U151 | U151 (mercury) nonwastewaters that contain greater than or equal to 260 mg/kg total mercury. | Mercury | 7439-97-6 | NA | RMERC |
| | U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are residues from RMERC only. | Mercury | 7439-97-6 | NA | 0.20 mg/L TCLP |
| | U151 (mercury) nonwastewaters that contain less than 260 mg/kg total mercury and that are not residues from RMERC. | Mercury | 7439-97-6 | NA | 0.025 mg/L TCLP |
| | All U151 (mercury) wastewaters. | Mercury | 7439-97-6 | 0.15 | NA |
| | Elemental Mercury Contaminated with Radioactive Materials | Mercury | 7439-97-6 | NA | AMLGM |
| U152 | Methacrylonitrile | Methacrylonitrile | 126-98-7 | 0.24 | 84 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| U153 | Methanethiol | Methanethiol | 74-93-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U154 | Methanol | Methanol | 67-56-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | | Methanol; alternate ⁶ set of standards for both wastewaters and nonwastewaters | 67-56-1 | 5.6 | 0.75 mg/L TCLP |
| U155 | Methapyrilene | Methapyrilene | 91-80-5 | 0.081 | 1.5 |
| U156 | Methyl chlorocarbonate | Methyl chlorocarbonate | 79-22-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U157 | 3-Methylcholanthrene | 3-Methylcholanthrene | 56-49-5 | 0.0055 | 15 |
| U158 | 4,4'-Methylene bis(2-chloroaniline) | 4,4'-Methylene bis(2-chloroaniline) | 101-14-4 | 0.50 | 30 |
| U159 | Methyl ethyl ketone | Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| U160 | Methyl ethyl ketone peroxide | Methyl ethyl ketone peroxide | 1338-23-4 | CHOXD; CHRED; CARBN; BIODG; or CMBST | CHOXD; CHRED; or CMBST |
| U161 | Methyl isobutyl ketone | Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| U162 | Methyl methacrylate | Methyl methacrylate | 80-62-6 | 0.14 | 160 |
| U163 | N-Methyl N'-nitro N-nitrosoguanidine | N-Methyl N'-nitro N-nitrosoguanidine | 70-25-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U164 | Methylthiouracil | Methylthiouracil | 56-04-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U165 | Naphthalene | Naphthalene | 91-20-3 | 0.059 | 5.6 |
| U166 | 1,4-Naphthoquinone | 1,4-Naphthoquinone | 130-15-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U167 | 1-Naphthylamine | 1-Naphthylamine | 134-32-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U168 | 2-Naphthylamine | 2-Naphthylamine | 91-59-8 | 0.52 | CMBST |
| U169 | Nitrobenzene | Nitrobenzene | 98-95-3 | 0.068 | 14 |
| U170 | p-Nitrophenol | p-Nitrophenol | 100-02-7 | 0.12 | 29 |
| U171 | 2-Nitropropane | 2-Nitropropane | 79-46-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U172 | N-Nitrosodi-n-butylamine | N-Nitrosodi-n-butylamine | 924-16-3 | 0.40 | 17 |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| U173 | N-Nitrosodiethanolamine | N-Nitrosodiethanolamine | 1116-54-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U174 | N-Nitrosodiethylamine | N-Nitrosodiethylamine | 55-18-5 | 0.40 | 28 |
| U176 | N-Nitroso-N-ethylurea | N-Nitroso-N-ethylurea | 759-73-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U177 | N-Nitroso-N-methylurea | N-Nitroso-N-methylurea | 684-93-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U178 | N-Nitroso-N-methylurethane | N-Nitroso-N-methylurethane | 615-53-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U179 | N-Nitrosopiperidine | N-Nitrosopiperidine | 100-75-4 | 0.013 | 35 |
| U180 | N-Nitrosopyrrolidine | N-Nitrosopyrrolidine | 930-55-2 | 0.013 | 35 |
| U181 | 5-Nitro-o-toluidine | 5-Nitro-o-toluidine | 99-55-8 | 0.32 | 28 |
| U182 | Paraldehyde | Paraldehyde | 123-63-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U183 | Pentachlorobenzene | Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| U184 | Pentachloroethane | Pentachloroethane | 76-01-7 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| | | Pentachloroethane; alternate ⁶ standards for both wastewaters and nonwastewaters | 76-01-7 | 0.055 | 6.0 |
| U185 | Pentachloronitrobenzene | Pentachloronitrobenzene | 82-68-8 | 0.055 | 4.8 |
| U186 | 1,3-Pentadiene | 1,3-Pentadiene | 504-60-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U187 | Phenacetin | Phenacetin | 62-44-2 | 0.081 | 16 |
| U188 | Phenol | Phenol | 108-95-2 | 0.039 | 6.2 |
| U189 | Phosphorus sulfide | Phosphorus sulfide | 1314-80-3 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| U190 | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 100-21-0 | 0.055 | 28 |
| | | Phthalic anhydride (measured as Phthalic acid or Terephthalic acid) | 85-44-9 | 0.055 | 28 |
| U191 | 2-Picoline | 2-Picoline | 109-06-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| U192 | Pronamide | Pronamide | 23950-58-5 | 0.093 | 1.5 |
| U193 | 1,3-Propane sultone | 1,3-Propane sultone | 1120-71-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U194 | n-Propylamine | n-Propylamine | 107-10-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U196 | Pyridine | Pyridine | 110-86-1 | 0.014 | 16 |
| U197 | p-Benzoquinone | p-Benzoquinone | 106-51-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U200 | Reserpine | Reserpine | 50-55-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U201 | Resorcinol | Resorcinol | 108-46-3 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U202 | Saccharin and salts | Saccharin | 81-07-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U203 | Safrole | Safrole | 94-59-7 | 0.081 | 22 |
| U204 | Selenium dioxide | Selenium | 7782-49-2 | 0.82 | 5.7 mg/L TCLP |
| U205 | Selenium sulfide | Selenium | 7782-49-2 | 0.82 | 5.7 mg/L TCLP |
| U206 | Streptozotocin | Streptozotocin | 18883-66-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U207 | 1,2,4,5-Tetrachlorobenzene | 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| U208 | 1,1,1,2-Tetrachloroethane | 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| U209 | 1,1,2,2-Tetrachloroethane | 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.057 | 6.0 |
| U210 | Tetrachloroethylene | Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| U211 | Carbon tetrachloride | Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| U213 | Tetrahydrofuran | Tetrahydrofuran | 109-99-9 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U214 | Thallium (I) acetate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| U215 | Thallium (I) carbonate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| U216 | Thallium (I) chloride | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |
| U217 | Thallium (I) nitrate | Thallium (measured in wastewaters only) | 7440-28-0 | 1.4 | RTHRM; or STABL |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|---|---|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| U218 | Thioacetamide | Thioacetamide | 62-55-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U219 | Thiourea | Thiourea | 62-56-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U220 | Toluene | Toluene | 108-88-3 | 0.080 | 10 |
| U221 | Toluenediamine | Toluenediamine | 25376-45-8 | CARBN; or CMBST | CMBST |
| U222 | o-Toluidine hydrochloride | o-Toluidine hydrochloride | 636-21-5 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U223 | Toluene diisocyanate | Toluene diisocyanate | 26471-62-5 | CARBN; or CMBST | CMBST |
| U225 | Bromoform (Tribromomethane) | Bromoform (Tribromomethane) | 75-25-2 | 0.63 | 15 |
| U226 | 1,1,1-Trichloroethane | 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| U227 | 1,1,2-Trichloroethane | 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| U228 | Trichloroethylene | Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| U234 | 1,3,5-Trinitrobenzene | 1,3,5-Trinitrobenzene | 99-35-4 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U235 | tris-(2,3-Dibromopropyl)-phosphate | tris-(2,3-Dibromopropyl)-phosphate | 126-72-7 | 0.11 | 0.10 |
| U236 | Trypan Blue | Trypan Blue | 72-57-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U237 | Uracil mustard | Uracil mustard | 66-75-1 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U238 | Urethane (Ethyl carbamate) | Urethane (Ethyl carbamate) | 51-79-6 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U239 | Xylenes | Xylenes-mixed isomers(sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| U240 | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 2,4-D (2,4-Dichlorophenoxyacetic acid) | 94-75-7 | 0.72 | 10 |
| | 2,4-D (2,4-Dichlorophenoxyacetic acid) salts and esters | | NA | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U243 | Hexachloropropylene | Hexachloropropylene | 1888-71-7 | 0.035 | 30 |
| U244 | Thiram | Thiram | 137-26-8 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |

| Waste code | Waste description and treatment/Regulatory subcategory ¹ | Regulated hazardous constituent | | Wastewaters | Nonwastewaters |
|------------|--|---------------------------------|-------------------------|--|--|
| | | Common name | CAS ² number | Concentration in mg/L ³ ; or Technology Code ⁴ | Concentration in mg/kg ⁵ unless noted as "mg/L TCLP"; or Technology Code ⁴ |
| U246 | Cyanogen bromide | Cyanogen bromide | 506-68-3 | CHOXD; WETOX; or CMBST | CHOXD; WETOX; or CMBST |
| U247 | Methoxychlor | Methoxychlor | 72-43-5 | 0.25 | 0.18 |
| U248 | Warfarin, & salts, when present at concentrations of 0.3% or less | Warfarin | 81-81-2 | (WETOX or CHOXD) fb CARBN; or CMBST | CMBST |
| U249 | Zinc phosphide, Zn ₃ P ₂ , when present at concentrations of 10% or less | Zinc Phosphide | 1314-84-7 | CHOXD; CHRED; or CMBST | CHOXD; CHRED; or CMBST |
| U271 | Benomyl | Benomyl | 17804-35-2 | 0.056 | 1.4 |
| U278 | Bendiocarb | Bendiocarb | 22781-23-3 | 0.056 | 1.4 |
| U279 | Carbaryl | Carbaryl | 63-25-2 | 0.006 | 0.14 |
| U280 | Barban | Barban | 101-27-9 | 0.056 | 1.4 |
| U328 | o-Toluidine | o-Toluidine | 95-53-4 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN. | CMBST |
| U353 | p-Toluidine | p-Toluidine | 106-49-0 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN | CMBST |
| U359 | 2-Ethoxyethanol | 2-Ethoxyethanol | 110-80-5 | CMBST; or CHOXD fb (BIODG or CARBN); or BIODG fb CARBN | CMBST |
| U364 | Bendiocarb phenol ¹⁰ | Bendiocarb phenol | 22961-82-6 | 0.056 | 1.4 |
| U367 | Carbofuran phenol | Carbofuran phenol | 1563-38-8 | 0.056 | 1.4 |
| U372 | Carbendazim | Carbendazim | 10605-21-7 | 0.056 | 1.4 |
| U373 | Propham | Propham | 122-42-9 | 0.056 | 1.4 |
| U387 | Prosulfocarb | Prosulfocarb | 52888-80-9 | 0.042 | 1.4 |
| U389 | Triallate | Triallate | 2303-17-5 | 0.042 | 1.4 |
| U394 | A2213 ¹⁰ | A2213 | 30558-43-1 | 0.042 | 1.4 |
| U395 | Diethylene glycol, dicarbamate ¹⁰ | Diethylene glycol, dicarbamate | 5952-26-1 | 0.056 | 1.4 |
| U404 | Triethylamine | Triethylamine | 121-44-8 | 0.081 | 1.5 |
| U409 | Thiophanate-methyl | Thiophanate-methyl | 23564-05-8 | 0.056 | 1.4 |
| U410 | Thiodicarb | Thiodicarb | 59669-26-0 | 0.019 | 1.4 |
| U411 | Propoxur | Propoxur | 114-26-1 | 0.056 | 1.4 |

1 The waste descriptions provided in this table do not replace waste descriptions in ch. NR 661. Descriptions of Treatment/Regulatory Subcategories are provided, as needed, to distinguish between applicability of different standards.

2 CAS means Chemical Abstract Services. When the waste code or regulated constituents are described as a combination of a chemical with its salts or esters, the CAS number is given for the parent compound only.

3 Concentration standards for wastewaters are expressed in mg/L and are based on analysis of composite samples.

4 All treatment standards expressed as a technology code or combination of technology codes are explained in detail in s. NR 668.42, Table 1—Technology Codes and Descriptions of Technology-Based Standards.

5 Except for metals (EP or TCLP) and cyanides (total and amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated according to the technical requirements of subch. O of ch. NR 664 or subch. O of ch. NR 665, or based upon combustion in fuel substitution units operating according to applicable technical requirements. A facility may comply with these treatment standards according to s. NR 668.40 (4). All concentration standards for nonwastewaters are based on analysis of grab samples.

6 Where an alternate treatment standard or set of alternate standards has been indicated, a facility may comply with this alternate standard, but only for the Treatment/Regulatory Subcategory or physical form (i.e., wastewater or nonwastewater) specified for that alternate standard.

7 Both cyanides (total) and cyanides (amenable) for nonwastewaters are to be analyzed using Method 9010C or 9012B, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA SW-846 incorporated by reference in s. NR 660.11, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.

8 These wastes, when rendered nonhazardous and then subsequently managed under ch. 283, Stats., or CWA-equivalent systems are not subject to treatment standards (see s. NR 668.01 (3) (d)).

9 These wastes, when rendered nonhazardous and then subsequently injected in a Class SDWA well, are not subject to treatment standards (see NR 665 subch. R).

10 The treatment standard for this waste may be satisfied by either meeting the constituent concentrations in this table or by treating the waste by the specified technologies: combustion, as defined by the technology code CMBST at s. NR 668.42, Table 1, for nonwastewaters; and biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at s. NR 668.42, Table 1, for wastewaters.

11 For these wastes, the definition of CMBST is limited to: (1) combustion units operating under ch. NR 666, (2) combustion units licensed under subch. O of ch. NR 664, or (3) combustion units licensed under subch. O of ch. NR 665 which have obtained a determination of equivalent treatment under 40 CFR 268.42(b).

12 Disposal of K175 wastes that have complied with all applicable s. NR 668.40 treatment standards must also be macroencapsulated in accordance with s. NR 668.45, Table 1 unless the waste is placed in one of the following:

- (1) A hazardous waste monofill containing only K175 wastes that meet all applicable s. NR 668.40 treatment standards.
- (2) A dedicated hazardous waste landfill cell in which all other wastes being co-disposed are at pH≤6.0.

13 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA SW-846, incorporated by reference in s. NR 660.11.

NR 668.41 Treatment standards expressed as concentrations in waste extract. For the requirements and the treatment standards in Table CCWE-Constituent Concentrations in Waste Extracts, both of which were found in s. NR 675.21 until June 1, 1998, refer to s. NR 668.40.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06.

NR 668.42 Treatment standards expressed as specified technologies.

Note: For the requirements previously found in Table 2-Technology-Based Standards By RCRA Waste Code and Table 3-Technology-Based Standards for Specific Radioactive Hazardous Mixed Waste, refer to s. NR 668.40.

(1) In the table entitled Treatment Standards for Hazardous Wastes, in s. NR 668.40, wastes for which standards are expressed as a treatment method rather than a concentration level, must be treated using the technology or technologies specified in the table entitled Technology Codes and Description of Technology-Based Standards.

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

| Technology code | Description of technology-based standards |
|-----------------|--|
| ADGAS: | Venting of compressed gases into an absorbing or reacting media (i.e., solid or liquid)—venting can be accomplished through physical release utilizing valves or piping; physical penetration of the container; or penetration through detonation. |
| AMLGM: | Amalgamation of liquid, elemental mercury contaminated with radioactive materials utilizing inorganic reagents such as copper, zinc, nickel, gold, and sulfur that result in a nonliquid, semi-solid amalgam and thereby reducing potential emissions of elemental mercury vapors to the air. |
| BIODG: | Biodegradation of organics or non-metallic inorganics (i.e., degradable inorganics that contain the elements of phosphorus, nitrogen, and sulfur) in units operated under either aerobic or anaerobic conditions such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., total organic carbon can often be used as an indicator parameter for the biodegradation of many organic constituents that cannot be directly analyzed in wastewater residues). |
| CARBN: | Carbon adsorption (granulated or powdered) of non-metallic inorganics, organo-metallics, or organic constituents, operated such that a surrogate compound or indicator parameter has not undergone breakthrough (e.g., total organic carbon can often be used as an indicator parameter for the adsorption of many organic constituents that cannot be directly analyzed in wastewater residues). Breakthrough occurs when the carbon has become saturated with the constituent (or indicator parameter) and substantial change in adsorption rate associated with that constituent occurs. |
| CHOXD: | Chemical or electrolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combinations of reagents: (1) Hypochlorite (e.g., bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permangantes; or (9) other oxidizing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., total organic carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues). Chemical oxidation specifically includes what is commonly referred to as alkaline chlorination. |
| CHRED: | Chemical reduction utilizing the following reducing reagents (or waste reagents) or combinations of reagents: (1) Sulfur dioxide; (2) sodium, potassium, or alkali salts or sulfites, bisulfites, metabisulfites, and polyethylene glycols (e.g., NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; or (5) other reducing reagents of equivalent efficiency, performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., total organic halogens can often be used as an indicator parameter for the reduction of many halogenated organic constituents that cannot be directly analyzed in wastewater residues). Chemical reduction is commonly used for the reduction of hexavalent chromium to the trivalent state. |
| CMBST: | High temperature organic destruction technologies, such as combustion in incinerators, boilers, or industrial furnaces operated in accordance with the applicable requirements of subch. O of ch. NR 664 or 665, or subch. H of ch. NR 666, and in other units operated in accordance with applicable technical operating requirements; and certain non-combustive technologies, such as the catalytic extraction process. |
| DEACT: | Deactivation to remove the hazardous characteristics of a waste due to its ignitability, corrosivity, or reactivity. |
| FSUBS: | Fuel substitution in units operated in accordance with applicable technical operating requirements. |
| HLVIT: | Vitrification of high level mixed radioactive wastes in units in compliance with all applicable radioactive protection requirements under control of the nuclear regulatory commission. |
| IMERC: | Incineration of wastes containing organics and mercury in units operated according to the technical operating requirements of subch. O of ch. NR 664 and 665. All wastewater and nonwastewater residues derived from this process shall then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (e.g., high or low mercury subcategories). |
| INCIN: | Incineration in units operated in accordance with the technical operating requirements of subch. O of ch. NR 664 and 665. |
| 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 shall undergo either incineration, reuse as a fuel, or other recovery or reuse and a raffinate (extracted liquid waste) proportionately low in organics that shall 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 s. NR 660.10. |
| NEUTR: | Neutralization with the following reagents (or waste reagents) or combinations of reagents: (1) acids; (2) bases; or (3) water (including wastewaters) resulting in a pH greater than 2 but less than 12.5 as measured in the aqueous residuals. |
| NLDBR: | No land disposal based on recycling. |

| | |
|--------|--|
| POLYM: | Formation of complex high-molecular weight solids through polymerization of monomers in high-TOC D001 non-wastewaters which are chemical components in the manufacture of plastics. |
| PRECP: | Chemical precipitation of metals and other inorganics as insoluble precipitates of oxides, hydroxides, carbonates, sulfides, sulfates, chlorides, fluorides, or phosphates. The following reagents (or waste reagents) are typically used alone or in combination: (1) lime (i.e., containing oxides or hydroxides of calcium or magnesium); (2) caustic (i.e., sodium or potassium hydroxides); (3) soda ash (i.e., sodium carbonate); (4) sodium sulfide; (5) ferric sulfate or ferric chloride; (6) alum; or (7) sodium sulfate. Additional flocculating, coagulation or similar reagents or processes that enhance sludge dewatering characteristics are not precluded from use. |
| RBERY: | Thermal recovery of beryllium. |
| RCGAS: | Recovery or reuse of compressed gases including techniques such as reprocessing of the gases for reuse or resale; filtering or adsorption of impurities; remixing for direct reuse or resale; and use of the gas as a fuel source. |
| RCORR: | Recovery of acids or bases utilizing one or more of the following recovery technologies: (1) distillation (i.e., thermal concentration); (2) ion exchange; (3) resin or solid adsorption; (4) reverse osmosis; or (5) incineration for the recovery of acid—Note: this does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies. |
| RLEAD: | Thermal recovery of lead in secondary lead smelters. |
| RMERC: | Retorting or roasting in a thermal processing unit capable of volatilizing mercury and subsequently condensing the volatilized mercury for recovery. The retorting or roasting unit (or facility) shall 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 shall then comply with the corresponding treatment standards per waste code with consideration of any applicable subcategories (e.g., high or low mercury subcategories). |
| RMETL: | Recovery of metals or inorganics utilizing one or more of the following direct physical or removal technologies: (1) ion exchange; (2) resin or solid (i.e., zeolites) adsorption; (3) reverse osmosis; (4) chelation or solvent extraction; (5) freeze crystallization; (6) ultrafiltration and/or (7) simple precipitation (i.e., crystallization)—Note: This does not preclude the use of other physical phase separation or concentration techniques such as decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies. |
| RORGS: | Recovery of organics utilizing one or more of the following technologies: (1) distillation; (2) thin film evaporation; (3) steam stripping; (4) carbon adsorption; (5) critical fluid extraction; (6) liquid-liquid extraction; (7) precipitation or crystallization (including freeze crystallization); or (8) chemical phase separation techniques (i.e., addition of acids, bases, demulsifiers, or similar chemicals);—Note: this does not preclude the use of other physical phase separation techniques such as a decantation, filtration (including ultrafiltration), and centrifugation, when used in conjunction with the above listed recovery technologies. |
| RTHRM: | Thermal recovery of metals or inorganics from nonwastewaters in units identified as industrial furnaces according to s. NR 660.10 (a), (f), (g), (k) and (L) under the definition of "industrial furnaces". |
| RZINC: | Remelting in high temperature metal recovery units for the purpose of recovery of zinc. |
| STABL: | Stabilization with the following reagents (or waste reagents) or combinations of reagents: (1) Portland cement; or (2) lime/pozzolans (e.g., fly ash and cement kiln dust)—this does not preclude the addition of reagents (e.g., iron salts, silicates, and clays) designed to enhance the set/cure time 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 shall undergo either incineration, reuse as a fuel, or other recovery or reuse and an extracted wastewater that shall undergo further treatment as specified in the standard. |
| WETOX: | Wet air oxidation performed in units operated such that a surrogate compound or indicator parameter has been substantially reduced in concentration in the residuals (e.g., total organic carbon can often be used as an indicator parameter for the oxidation of many organic constituents that cannot be directly analyzed in wastewater residues). |
| WTRRX: | Controlled reaction with water for highly reactive inorganic or organic chemicals with precautionary controls for protection of workers from potential violent reactions as well as precautionary controls for potential emissions of toxic or ignitable levels of gases released during the reaction. |

Note: When more than one technology (or treatment train) are specified as alternative treatment standards, the 5 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.

(2) Any person may submit an application to the EPA Administrator demonstrating that an alternative treatment method can achieve a measure of performance equivalent to that achieved by methods specified in subs. (1), (3) and (4) for wastes, or specified in Table 1 for hazardous debris. The applicant shall submit information demonstrating that the treatment method is in compliance with federal, state and local requirements and is protective of human health and the environment. On the basis of this information and any other available information, the EPA Administrator may approve the use of the alternative treatment method if the EPA Administrator finds that the alternative treatment method provides a measure of performance equivalent to that achieved by methods specified in subs. (1), (3) and (4) for wastes or in s. NR 668.45, Table 1 for hazardous debris. The department shall accept any written determination issued by the EPA Administrator unless the department determines that the approved alternative method cannot achieve a measure of performance equivalent to that achieved by methods specified in subs. (1), (3) and (4) for wastes, or specified in Table 1 for hazardous debris.

(3) As an alternative to the treatment standards required in subch. D, lab packs may be land disposed provided all of the following requirements are met:

(a) The lab packs comply with s. NR 664.0316 and s. NR 665.0316.

(b) The lab packs do not contain any of the wastes listed in ch. NR 668 Appendix IV.

(c) The lab packs are incinerated in accordance with the requirements of subch. O of ch. NR 664 or subch. O of ch. NR 665.

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

(4) Radioactive hazardous mixed wastes are subject to the treatment standards in s. NR 668.40. Where the table entitled Treatment Standards for Hazardous Wastes found in s. NR 668.40 specifies treatment standards for radioactive mixed wastes, 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 s. NR 668.45.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06.

NR 668.43 Treatment standards expressed as waste concentrations. For the requirements previously found in this section and for treatment standards in Table CCW—Constituent Concentrations in Wastes, refer to s. NR 668.40.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06.

NR 668.44 Variance from a treatment standard.

(1) Based on a petition filed by a generator or treater of hazardous waste, the EPA administrator may approve a variance from an applicable treatment standard if any of the following are met:

(a) It is not physically possible to treat the waste to the level specified in the treatment standard, or by the method specified as the treatment standard. To show that this is the case, the petitioner 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.

(b) It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though the treatment is technically possible. To show that this is the case, the petitioner shall demonstrate one of the following:

1. 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).

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

(2) Each petition shall be submitted to the EPA administrator according to the procedures in 40 CFR 260.20.

(6) 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 s. NR 668.07.

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

(8) Based on a petition filed by a generator or treater of hazardous waste, the department may approve a site-specific variance from an applicable treatment standard if one of the following conditions is met:

(a) It is not physically possible to treat the waste to the level specified in the treatment standard, or by the method specified as the treatment standard. To show that this is the case, the petitioner 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.

(b) It is inappropriate to require the waste to be treated to the level specified in the treatment standard or by the method specified as the treatment standard, even though the treatment is technically possible. To show that this is the case, the petitioner shall demonstrate one of the following:

1. Treatment to the specified level or by the specified method is technically inappropriate, for example, the treatment would result in combustion of large amounts of mildly contaminated environmental media where the treatment standard is not based on combustion of the media.

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

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

1. At a minimum, treatment variances shall impose alternative land disposal restriction treatment standards that, using a reasonable maximum exposure scenario, meet all of the following conditions:

a. For carcinogens, the treatment variances shall 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} .

b. For constituents with non-carcinogenic effects, the treatment variances shall achieve constituent concentrations that an individual could be exposed to on a daily basis without appreciable risk of deleterious effect during a lifetime.

2. The treatment variances may not consider post-land-disposal controls.

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

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

(9) Each application for a site-specific variance from a treatment standard shall include the information in s. NR 660.20.

(10) After receiving an application for a site-specific variance from a treatment standard, the department may request any additional information or samples which may be required to evaluate the application.

(11) 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 in s. NR 668.07.

(12) During the application review process, the applicant for a site-specific variance shall comply with all restrictions on land disposal in this chapter once the effective date for the waste has been reached.

(13) 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, the department may take into account whether a treatment variance should be approved if the subject waste is to be used in a manner constituting disposal pursuant to ss. NR 666.020 to 666.023.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. (8) (intro.), (10), (13) Register July 2017 No. 739, eff. 8-1-17.

NR 668.45 Treatment standards for hazardous debris.

(1) Hazardous debris shall be treated prior to land disposal unless the department determines under s. NR 661.03 (6) (b) that the debris is no longer contaminated with hazardous waste or the debris is treated to the waste-specific treatment standard provided in this subchapter for the waste contaminating the debris

(a) *General.* Hazardous debris shall be treated for each "contaminant subject to treatment" defined by sub. (2) using the technology or technologies identified in Table 1.

(b) *Characteristic debris.* Hazardous debris that exhibits the characteristic of ignitability, corrosivity, or reactivity identified under ss. NR 661.21, 661.22 and 661.23, respectively, shall be deactivated by treatment using one of the technologies identified in Table 1.

(c) *Mixtures of debris types.* The treatment standards of Table 1 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.

(d) *Mixtures of contaminant types.* Debris that is contaminated with 2 or more contaminants subject to treatment identified under sub. (2) shall be treated for each contaminant using one or more treatment technologies identified in Table 1. If an immobilization technology is used in a treatment train, it shall be the last treatment technology used.

(e) *Waste PCBs.* Hazardous debris that is also a waste PCB under 40 CFR 761.3 is subject to the requirements of either 40

CFR 761.3 or the requirements of this section, whichever are more stringent.

(2) Hazardous debris shall be treated for each “contaminant subject to treatment.” The contaminants subject to treatment shall be determined using all of the following criteria:

(a) *Toxicity characteristic debris.* The contaminants subject to treatment for debris that exhibits the toxicity characteristic (TC) by s. NR 661.24 are those EP constituents for which the debris exhibits the TC toxicity characteristic.

(b) *Debris contaminated with listed waste.* The contaminants subject to treatment for debris that is contaminated with a prohibited listed hazardous waste are those constituents or wastes for which treatment standards are established for the waste under s. NR 668.40.

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

(3) Hazardous debris that has been treated using one of the specified extraction or destruction technologies in Table 1 and that does not exhibit a characteristic of hazardous waste identified under subch. C of ch. NR 661 after treatment is not a hazardous waste and need not be managed in a facility licensed or permitted to accept hazardous waste. Hazardous debris contaminated with a listed waste that is treated by an immobilization technology specified in Table 1 is a hazardous waste and shall be managed in a facility licensed or permitted to accept hazardous waste.

(4) Treatment residuals shall be treated as follows:

(a) *General requirements.* Except as provided by pars. (b) and (d) all of the following conditions shall be met:

1. Residue from the treatment of hazardous debris shall be separated from the treated debris using simple physical or mechanical means.

2. Residue from the treatment of hazardous debris is subject to the waste-specific treatment standards provided by subch. D of ch. NR 668 for the waste contaminating the debris.

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

(c) *Cyanide-reactive debris.* Residue from the treatment of debris that is reactive because of cyanide shall meet the treatment standards for D003 in Treatment Standards for Hazardous Wastes in s. NR 668.40.

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

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

Table 1
Alternative Treatment Standards For Hazardous Debris ¹

| Technology description | Performance and/or design and operating standard | Contaminant restrictions ² |
|---|---|---|
| A. Extraction Technologies: | | |
| 1. Physical Extraction | | |
| a. Abrasive Blasting: Removal of contaminated debris surface layers using water or air pressure to propel a solid media (e.g., steel shot, aluminum oxide grit, plastic beads). | Glass, Metal, Plastic, Rubber: Treatment to a clean debris surface ³ . Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Removal of at least 0.6 cm of the surface layer; treatment to a clean debris surface ³ . | All Debris: None. |
| b. Scarification, Grinding and Planing: Process utilizing striking piston heads, saws, or rotating grinding wheels such that contaminated debris surface layers are removed. | Same as above | Same as above. |
| c. Spalling: Drilling or chipping holes at appropriate locations and depth in the contaminated debris surface and applying a tool which exerts a force on the sides of those holes such that the surface layer is removed. The surface layer removed remains hazardous debris subject to the debris treatment standards. | Same as above | Same as above. |
| d. Vibratory Finishing: Process utilizing scrubbing media, flushing fluid, and oscillating energy such that hazardous contaminants or contaminated debris surface layers are removed ⁴ . | Same as above | Same as above. |
| e. High Pressure Steam and Water Sprays: Application of water or steam sprays of sufficient temperature, pressure, residence time, agitation, surfactants and detergents to remove hazardous contaminants from debris surfaces or to remove contaminated debris surface layers. | Same as above | Same as above. |
| 2. Chemical Extraction | | |
| a. Water Washing and Spraying: Application of water sprays or water baths of sufficient temperature, pressure, residence time, agitation, surfactants, acids, bases and detergents to remove hazardous contaminants from debris surfaces and surface pores or to remove contaminated debris surface layers. | All Debris: Treatment to a clean debris surface ³ . Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris shall be no more than 1.2 cm (1/2 inch) in one dimension (i.e., thickness limit ⁵ , except that this thickness limit may be waived under an "Equivalent Technology" approval under s. NR 668.42 (2)8; debris surfaces shall be in contact with water solution for at least 15 minutes. | Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Contaminant shall 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 s. NR 668.42 (2) shall be obtained ⁸ . |
| 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 . | Same as above | Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Same as above, except that contaminant shall be soluble to at least 5% by weight in the solvent. |
| c. Vapor Phase Solvent Extraction: Application of an organic vapor using sufficient agitation, residence time, and temperature to cause hazardous contaminants on contaminated debris surfaces and surface pores to enter the vapor phase and be flushed away with the organic vapor ⁴ . | Same as above, except that brick, cloth, concrete, paper, pavement, rock and wood surfaces shall be in contact with the organic vapor for at least 60 minutes. | Same as above. |
| 3. Thermal Extraction | | |
| a. High Temperature Metals Recovery: Application of sufficient heat, residence time, mixing, fluxing agents, or carbon in a smelting, melting, or refining furnace to separate metals from debris. | For refining furnaces, treated debris shall be separated from treatment residuals using simple physical or mechanical means ⁹ , and, prior to further treatment, the residuals shall 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 s. NR 668.42 (2) 8. |

| Technology description | Performance and/or design and operating standard | Contaminant restrictions ² |
|---|--|--|
| <p>b. Thermal Desorption: Heating in an enclosed chamber under either oxidizing or nonoxidizing atmospheres at sufficient temperature and residence time to vaporize hazardous contaminants from contaminated surfaces and surface pores and to remove the contaminants from the heating chamber in a gaseous exhaust gas⁷.</p> | <p>All Debris: Obtain an "Equivalent Technology" approval under s. NR 668.42 (2)8; treated debris shall be separated from treatment residuals using simple physical or mechanical means⁹, and, prior to further treatment, the residue shall meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.</p> <p>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris shall be no more than 10 cm (4 inches) in one dimension (i.e., thickness limit)⁵, except that this thickness limit may be waived under the "Equivalent Technology" approval.</p> | <p>All Debris: Metals other than mercury.</p> |
| <p>B. Destruction Technologies:</p> | | |
| <p>1. Biological Destruction (Biodegradation): Removal of hazardous contaminants from debris surfaces and surface pores in an aqueous solution and biodegradation of organic or nonmetallic inorganic compounds (i.e., inorganics that contain phosphorus, nitrogen or sulfur) in units operated under either aerobic or anaerobic conditions.</p> | <p>All Debris: Obtain an "Equivalent Technology" approval under s. NR 668.42 (2)8; treated debris shall be separated from treatment residuals using simple physical or mechanical means⁹, and, prior to further treatment, the residue shall meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.</p> <p>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris shall be no more than 1.2 cm (1/2 inch) in one dimension (i.e., thickness limit)⁵, except that this thickness limit may be waived under the "Equivalent Technology" approval.</p> | <p>All Debris: Metal contaminants.</p> |
| <p>2. Chemical Destruction</p> | | |
| <p>a. Chemical Oxidation: Chemical or electrolytic oxidation utilizing the following oxidation reagents (or waste reagents) or combination of reagents—(1) hypochlorite (e.g., bleach); (2) chlorine; (3) chlorine dioxide; (4) ozone or UV (ultraviolet light) assisted ozone; (5) peroxides; (6) persulfates; (7) perchlorates; (8) permanganates; or (9) other oxidizing reagents of equivalent destruction efficiency⁴. Chemical oxidation specifically includes what is referred to as alkaline chlorination.</p> | <p>All Debris: Obtain an "Equivalent Technology" approval under s. NR 668.42 (2)8; treated debris shall be separated from treatment residuals using simple physical or mechanical means⁹, and, prior to further treatment, the residue shall meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.</p> <p>Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris shall be no more than 1.2 cm (1/2 inch) in one dimension (i.e., thickness limit)⁵, except that this thickness limit may be waived under the "Equivalent Technology" approval.</p> | <p>All Debris: Metal contaminants.</p> |
| <p>b. Chemical Reduction: Chemical reaction utilizing the following reducing reagents (or waste reagents) or combination of reagents: (1) sulfur dioxide; (2) sodium, potassium or alkali salts of sulfites, bisulfites and metabisulfites, and polyethylene glycols (e.g., NaPEG and KPEG); (3) sodium hydrosulfide; (4) ferrous salts; or (5) other reducing reagents of equivalent efficiency⁴.</p> | <p>Same as above</p> | <p>Same as above.</p> |
| <p>3. Thermal Destruction: Treatment in an incinerator operating in accordance with subch. O of ch. NR 664 or 665; a boiler or industrial furnace operating in accordance with subch. H of ch. NR 666, or other thermal treatment unit operated in accordance with subch. X of ch. NR 664, or subch. P of ch. NR 665, but excluding for purposes of these debris treatment standards thermal desorption units.</p> | <p>Treated debris shall be separated from treatment residuals using simple physical or mechanical means⁹, and, prior to further treatment, the residue shall meet the waste-specific treatment standards for organic compounds in the waste contaminating the debris.</p> | <p>Brick, Concrete, Glass, Metal, Pavement, Rock, Metal: Metals other than mercury, except that there are no metal restrictions for vitrification. Debris contaminated with a dioxin-listed waste:⁶ Obtain an "Equivalent Technology" approval under s. NR 668.42 (2)8, except that this requirement does not apply to vitrification.</p> |

| Technology description | Performance and/or design and operating standard | Contaminant restrictions ² |
|---|--|---------------------------------------|
| C. Immobilization Technologies: | | |
| 1. Macroencapsulation: Application of surface coating materials such as polymeric organics (e.g., resins and plastics) or use of a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media. | Encapsulating material shall completely encapsulate debris and be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other waste, microbes). | None. |
| 2. Microencapsulation: Stabilization of the debris with the following reagents (or waste reagents) such that the leachability of the hazardous contaminants is reduced: (1) portland cement; or (2) lime/ pozzolans (e.g., fly ash and cement kiln dust). Reagents (e.g., iron salts, silicates, and clays) may be added to enhance the set/cure time or compressive strength, or to reduce the leachability of the hazardous constituents ⁵ . | Leachability of the hazardous contaminants shall be reduced. | None. |
| 3. Sealing: Application of an appropriate material which adheres tightly to the debris surface to avoid exposure of the surface to potential leaching media. When necessary to effectively seal the surface, sealing entails pretreatment of the debris surface to remove foreign matter and to clean and roughen the surface. Sealing materials include epoxy, silicone, and urethane compounds, but paint may not be used as a sealant. | Sealing shall avoid exposure of the debris surface to potential leaching media and sealant shall be resistant to degradation by the debris and its contaminants and materials into which it may come into contact after placement (leachate, other waste, microbes). | None. |

¹ Hazardous debris shall be treated by either these standards or the waste-specific treatment standards for the waste contaminating the debris. The treatment standards shall 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.

² Contaminant restriction means that the technology is not BDAT for that contaminant. If debris containing a restricted contaminant is treated by the technology, the contaminant shall be subsequently treated by a technology for which it is not restricted in order to be land disposed (and excluded from regulation as hazardous waste).

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 if the 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.

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

⁵ If reducing the particle size of debris to meet the treatment standards results in material that no longer meets the 60 mm minimum particle size limit for debris, the 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 shall be used to provide the cleaning and separation of nondebris materials to ensure that the debris surface is free of caked soil, waste or other nondebris material.

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

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

⁸ The demonstration "Equivalent Technology" under s. NR 668.42 (2) shall 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.

⁹ 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 shall 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 shall 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.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. Table 1, footnotes 3, 4, Register July 2017 No. 739, eff. 8-1-17.

NR 668.46 Alternative treatment standards based on HTMR. For the treatment standards previously found in this section, refer to s. NR 668.40.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06.

NR 668.48 Universal treatment standards. (1) Table UTS identifies the hazardous constituents, along with the non-

wastewater and wastewater treatment standard levels, that are used to regulate most prohibited hazardous wastes with numerical limits. For determining compliance with treatment standards for underlying hazardous constituents as defined in s. NR 668.02 (9), these treatment standards may not be exceeded. Compliance with these treatment standards is measured by an analysis of grab samples, unless otherwise noted in the following Table UTS.

Section NR 668.48 — Universal Treatment Standards

| Regulated constituent common name | CAS ¹ Number | Wastewater Standard | Nonwastewater Standard |
|---|-------------------------|------------------------------------|---|
| | | Concentration in mg/L ² | Concentration in mg/kg ³ unless noted as "mg/L TCLP" |
| <i>Organic Constituents</i> | | | |
| Acenaphthylene | 208-96-8 | 0.059 | 3.4 |
| Acenaphthene | 83-32-9 | 0.059 | 3.4 |
| Acetone | 67-64-1 | 0.28 | 160 |
| Acetonitrile | 75-05-8 | 5.6 | 38 |
| Acetophenone | 96-86-2 | 0.010 | 9.7 |
| 2-Acetylaminofluorene | 53-96-3 | 0.059 | 140 |
| Acrolein | 107-02-8 | 0.29 | NA |
| Acrylamide | 79-06-1 | 19 | 23 |
| Acrylonitrile | 107-13-1 | 0.24 | 84 |
| Aldicarb sulfone ⁶ | 1646-88-4 | 0.056 | 0.28 |
| Aldrin | 309-00-2 | 0.021 | 0.066 |
| 4-Aminobiphenyl | 92-67-1 | 0.13 | NA |
| Aniline | 62-53-3 | 0.81 | 14 |
| o-Anisidine (2-methoxyaniline) | 90-04-0 | 0.010 | 0.66 |
| Anthracene | 120-12-7 | 0.059 | 3.4 |
| Aramite | 140-57-8 | 0.36 | NA |
| alpha-BHC | 319-84-6 | 0.00014 | 0.066 |
| beta-BHC | 319-85-7 | 0.00014 | 0.066 |
| delta-BHC | 319-86-8 | 0.023 | 0.066 |
| gamma-BHC | 58-89-9 | 0.0017 | 0.066 |
| Barban ⁶ | 101-27-9 | 0.056 | 1.4 |
| Bendiocarb ⁶ | 22781-23-3 | 0.056 | 1.4 |
| Benomyl ⁶ | 17804-35-2 | 0.056 | 1.4 |
| Benzene | 71-43-2 | 0.14 | 10 |
| Benz(a)anthracene | 56-55-3 | 0.059 | 3.4 |
| Benzal chloride | 98-87-3 | 0.055 | 6.0 |
| Benzo(b)fluoranthene (difficult to distinguish from benzo(k)fluoranthene) | 205-99-2 | 0.11 | 6.8 |
| Benzo(k)fluoranthene (difficult to distinguish from benzo(b)fluoranthene) | 207-08-9 | 0.11 | 6.8 |
| Benzo(g,h,i)perylene | 191-24-2 | 0.0055 | 1.8 |
| Benzo(a)pyrene | 50-32-8 | 0.061 | 3.4 |
| Bromodichloromethane | 75-27-4 | 0.35 | 15 |
| Bromomethane/Methyl bromide | 74-83-9 | 0.11 | 15 |
| 4-Bromophenyl phenyl ether | 101-55-3 | 0.055 | 15 |
| n-Butyl alcohol | 71-36-3 | 5.6 | 2.6 |
| Butylate ⁶ | 2008-41-5 | 0.042 | 1.4 |
| Butyl benzyl phthalate | 85-68-7 | 0.017 | 28 |
| 2-sec-Butyl-4,6-dinitrophenol/Dinoseb | 88-85-7 | 0.066 | 2.5 |
| Carbaryl ⁶ | 63-25-2 | 0.006 | 0.14 |
| Carbenzadim ⁶ | 10605-21-7 | 0.056 | 1.4 |
| Carbofuran ⁶ | 1563-66-2 | 0.006 | 0.14 |
| Carbofuran phenol ⁶ | 1563-38-8 | 0.056 | 1.4 |
| Carbon disulfide | 75-15-0 | 3.8 | 4.8 mg/L TCLP |
| Carbon tetrachloride | 56-23-5 | 0.057 | 6.0 |
| Carbosulfan ⁶ | 55285-14-8 | 0.028 | 1.4 |
| Chlordane (alpha and gamma isomers) | 57-74-9 | 0.0033 | 0.26 |
| p-Chloroaniline | 106-47-8 | 0.46 | 16 |

| Regulated constituent common name | CAS ¹ Number | Wastewater Standard | Nonwastewater Standard |
|---|-------------------------|------------------------------------|---|
| | | Concentration in mg/L ² | Concentration in mg/kg ³ unless noted as "mg/L TCLP" |
| Chlorobenzene | 108-90-7 | 0.057 | 6.0 |
| Chlorobenzilate | 510-15-6 | 0.10 | NA |
| 2-Chloro-1,3-butadiene | 126-99-8 | 0.057 | 0.28 |
| Chlorodibromomethane | 124-48-1 | 0.057 | 15 |
| Chloroethane | 75-00-3 | 0.27 | 6.0 |
| bis(2-Chloroethoxy)methane | 111-91-1 | 0.036 | 7.2 |
| bis(2-Chloroethyl)ether | 111-44-4 | 0.033 | 6.0 |
| Chloroform | 67-66-3 | 0.046 | 6.0 |
| bis(2-Chloroisopropyl)ether | 39638-32-9 | 0.055 | 7.2 |
| p-Chloro-m-cresol | 59-50-7 | 0.018 | 14 |
| 2-Chloroethyl vinyl ether | 110-75-8 | 0.062 | NA |
| Chloromethane/Methyl chloride | 74-87-3 | 0.19 | 30 |
| 2-Chloronaphthalene | 91-58-7 | 0.055 | 5.6 |
| 2-Chlorophenol | 95-57-8 | 0.044 | 5.7 |
| 3-Chloropropylene | 107-05-1 | 0.036 | 30 |
| Chrysene | 218-01-9 | 0.059 | 3.4 |
| p-Cresidine | 120-71-8 | 0.010 | 0.66 |
| o-Cresol | 95-48-7 | 0.11 | 5.6 |
| m-Cresol (difficult to distinguish from p-cresol) | 108-39-4 | 0.77 | 5.6 |
| p-Cresol (difficult to distinguish from m-cresol) | 106-44-5 | 0.77 | 5.6 |
| m-Cumenyl methylcarbamate ⁶ | 64-00-6 | 0.056 | 1.4 |
| Cyclohexanone | 108-94-1 | 0.36 | 0.75 mg/L TCLP |
| o,p'-DDD | 53-19-0 | 0.023 | 0.087 |
| p,p'-DDD | 72-54-8 | 0.023 | 0.087 |
| o,p'-DDE | 3424-82-6 | 0.031 | 0.087 |
| p,p'-DDE | 72-55-9 | 0.031 | 0.087 |
| o,p'-DDT | 789-02-6 | 0.0039 | 0.087 |
| p,p'-DDT | 50-29-3 | 0.0039 | 0.087 |
| Dibenz(a,h)anthracene | 53-70-3 | 0.055 | 8.2 |
| Dibenz(a,e)pyrene | 192-65-4 | 0.061 | NA |
| 1,2-Dibromo-3-chloropropane | 96-12-8 | 0.11 | 15 |
| 1,2-Dibromoethane/Ethylene dibromide | 106-93-4 | 0.028 | 15 |
| Dibromomethane | 74-95-3 | 0.11 | 15 |
| m-Dichlorobenzene | 541-73-1 | 0.036 | 6.0 |
| o-Dichlorobenzene | 95-50-1 | 0.088 | 6.0 |
| p-Dichlorobenzene | 106-46-7 | 0.090 | 6.0 |
| Dichlorodifluoromethane | 75-71-8 | 0.23 | 7.2 |
| 1,1-Dichloroethane | 75-34-3 | 0.059 | 6.0 |
| 1,2-Dichloroethane | 107-06-2 | 0.21 | 6.0 |
| 1,1-Dichloroethylene | 75-35-4 | 0.025 | 6.0 |
| trans-1,2-Dichloroethylene | 156-60-5 | 0.054 | 30 |
| 2,4-Dichlorophenol | 120-83-2 | 0.044 | 14 |
| 2,6-Dichlorophenol | 87-65-0 | 0.044 | 14 |
| 2,4-Dichlorophenoxyacetic acid/2,4-D | 94-75-7 | 0.72 | 10 |
| 1,2-Dichloropropane | 78-87-5 | 0.85 | 18 |
| cis-1,3-Dichloropropylene | 10061-01-5 | 0.036 | 18 |
| trans-1,3-Dichloropropylene | 10061-02-6 | 0.036 | 18 |
| Dieldrin | 60-57-1 | 0.017 | 0.13 |

| Regulated constituent common name | CAS ¹ Number | Wastewater Standard | Nonwastewater Standard |
|---|-------------------------|------------------------------------|---|
| | | Concentration in mg/L ² | Concentration in mg/kg ³ unless noted as "mg/L TCLP" |
| Diethyl phthalate | 84-66-2 | 0.20 | 28 |
| p-Dimethylaminoazobenzene | 60-11-7 | 0.13 | NA |
| 2,4-Dimethylaniline (2,4-xylydine) | 95-68-1 | 0.010 | 0.66 |
| 2-4-Dimethyl phenol | 105-67-9 | 0.036 | 14 |
| Dimethyl phthalate | 131-11-3 | 0.047 | 28 |
| Di-n-butyl phthalate | 84-74-2 | 0.057 | 28 |
| 1,4-Dinitrobenzene | 100-25-4 | 0.32 | 2.3 |
| 4,6-Dinitro-o-cresol | 534-52-1 | 0.28 | 160 |
| 2,4-Dinitrophenol | 51-28-5 | 0.12 | 160 |
| 2,4-Dinitrotoluene | 121-14-2 | 0.32 | 140 |
| 2,6-Dinitrotoluene | 606-20-2 | 0.55 | 28 |
| Di-n-octyl phthalate | 117-84-0 | 0.017 | 28 |
| Di-n-propylnitrosamine | 621-64-7 | 0.40 | 14 |
| 1,4-Dioxane | 123-91-1 | 12.0 | 170 |
| Diphenylamine (difficult to distinguish from diphenylnitrosamine) | 122-39-4 | 0.92 | 13 |
| Diphenylnitrosamine (difficult to distinguish from diphenylamine) | 86-30-6 | 0.92 | 13 |
| 1,2-Diphenylhydrazine | 122-66-7 | 0.087 | NA |
| Disulfoton | 298-04-4 | 0.017 | 6.2 |
| Dithiocarbamates (total) ⁶ | NA | 0.028 | 28 |
| Endosulfan I | 959-98-8 | 0.023 | 0.066 |
| Endosulfan II | 33213-65-9 | 0.029 | 0.13 |
| Endosulfan sulfate | 1031-07-8 | 0.029 | 0.13 |
| Endrin | 72-20-8 | 0.0028 | 0.13 |
| Endrin aldehyde | 7421-93-4 | 0.025 | 0.13 |
| EPTC ⁶ | 759-94-4 | 0.042 | 1.4 |
| Ethyl acetate | 141-78-6 | 0.34 | 33 |
| Ethyl benzene | 100-41-4 | 0.057 | 10 |
| Ethyl cyanide/Propanenitrile | 107-12-0 | 0.24 | 360 |
| Ethyl ether | 60-29-7 | 0.12 | 160 |
| Ethyl methacrylate | 97-63-2 | 0.14 | 160 |
| Ethylene oxide | 75-21-8 | 0.12 | NA |
| Famphur | 52-85-7 | 0.017 | 15 |
| Fluoranthene | 206-44-0 | 0.068 | 3.4 |
| Fluorene | 86-73-7 | 0.059 | 3.4 |
| Formetanate hydrochloride ⁶ | 23422-53-9 | 0.056 | 1.4 |
| Heptachlor | 76-44-8 | 0.0012 | 0.066 |
| Heptachlor epoxide | 1024-57-3 | 0.016 | 0.066 |
| 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin(1,2,3,4,6,7,8-HpCDD) | 35822-46-9 | 0.000035 | 0.0025 |
| 1,2,3,4,6,7,8-Heptachlorodibenzofuran (1,2,3,4,6,7,8-HpCDF) | 67562-39-4 | 0.000035 | 0.0025 |
| 1,2,3,4,7,8,9-Heptachlorodibenzofuran (1,2,3,4,7,8,9-HpCDF) | 55673-89-7 | 0.000035 | 0.0025 |
| Hexachlorobenzene | 118-74-1 | 0.055 | 10 |
| Hexachlorobutadiene | 87-68-3 | 0.055 | 5.6 |
| Hexachlorocyclopentadiene | 77-47-4 | 0.057 | 2.4 |
| HxCDDs (All Hexachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| HxCDFs (All Hexachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| Hexachloroethane | 67-72-1 | 0.055 | 30 |
| Indeno (1,2,3-c,d) pyrene | 193-39-5 | 0.0055 | 3.4 |
| Iodomethane | 74-88-4 | 0.19 | 65 |

| Regulated constituent common name | CAS ¹ Number | Wastewater Standard | Nonwastewater Standard |
|---|-------------------------|------------------------------------|---|
| | | Concentration in mg/L ² | Concentration in mg/kg ³ unless noted as "mg/L TCLP" |
| Isobutyl alcohol | 78-83-1 | 5.6 | 170 |
| Isodrin | 465-73-6 | 0.021 | 0.066 |
| Isosafrole | 120-58-1 | 0.081 | 2.6 |
| Kepone | 143-50-0 | 0.0011 | 0.13 |
| Methacrylonitrile | 126-98-7 | 0.24 | 84 |
| Methanol | 67-56-1 | 5.6 | 0.75 mg/L TCLP |
| Methapyrilene | 91-80-5 | 0.081 | 1.5 |
| Methiocarb ⁶ | 2032-65-7 | 0.056 | 1.4 |
| Methomyl ⁶ | 16752-77-5 | 0.028 | 0.14 |
| Methoxychlor | 72-43-5 | 0.25 | 0.18 |
| 3-Methylcholanthrene | 56-49-5 | 0.0055 | 15 |
| 4,4-Methylene bis(2-chloroaniline) | 101-14-4 | 0.50 | 30 |
| Methylene chloride | 75-09-2 | 0.089 | 30 |
| Methyl ethyl ketone | 78-93-3 | 0.28 | 36 |
| Methyl isobutyl ketone | 108-10-1 | 0.14 | 33 |
| Methyl methacrylate | 80-62-6 | 0.14 | 160 |
| Methyl methanesulfonate | 66-27-3 | 0.018 | NA |
| Methyl parathion | 298-00-0 | 0.014 | 4.6 |
| Metolcarb ⁶ | 1129-41-5 | 0.056 | 1.4 |
| Mexacarbate ⁶ | 315-18-4 | 0.056 | 1.4 |
| Molinate ⁶ | 2212-67-1 | 0.042 | 1.4 |
| Naphthalene | 91-20-3 | 0.059 | 5.6 |
| 2-Naphthylamine | 91-59-8 | 0.52 | NA |
| o-Nitroaniline | 88-74-4 | 0.27 | 14 |
| p-Nitroaniline | 100-01-6 | 0.028 | 28 |
| Nitrobenzene | 98-95-3 | 0.068 | 14 |
| 5-Nitro-o-toluidine | 99-55-8 | 0.32 | 28 |
| o-Nitrophenol | 88-75-5 | 0.028 | 13 |
| p-Nitrophenol | 100-02-7 | 0.12 | 29 |
| N-Nitrosodiethylamine | 55-18-5 | 0.40 | 28 |
| N-Nitrosodimethylamine | 62-75-9 | 0.40 | 2.3 |
| N-Nitroso-di-n-butylamine | 924-16-3 | 0.40 | 17 |
| N-Nitrosomethylethylamine | 10595-95-6 | 0.40 | 2.3 |
| N-Nitrosomorpholine | 59-89-2 | 0.40 | 2.3 |
| N-Nitrosopiperidine | 100-75-4 | 0.013 | 35 |
| N-Nitrosopyrrolidine | 930-55-2 | 0.013 | 35 |
| 1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD) | 3268-87-9 | 0.000063 | 0.005 |
| 1,2,3,4,6,7,8,9-Octachlorodibenzofuran (OCDF) | 39001-02-0 | 0.000063 | 0.005 |
| Oxamyl ⁶ | 23135-22-0 | 0.056 | 0.28 |
| Parathion | 56-38-2 | 0.014 | 4.6 |
| Total PCBs (sum of all PCB isomers, or all Aroclors) ⁸ | 1336-36-3 | 0.10 | 10 |
| Pebulate ⁶ | 1114-71-2 | 0.042 | 1.4 |
| Pentachlorobenzene | 608-93-5 | 0.055 | 10 |
| PeCDDs (All Pentachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| PeCDFs (All Pentachlorodibenzofurans) | NA | 0.000035 | 0.001 |
| Pentachloroethane | 76-01-7 | 0.055 | 6.0 |
| Pentachloronitrobenzene | 82-68-8 | 0.055 | 4.8 |
| Pentachlorophenol | 87-86-5 | 0.089 | 7.4 |

| Regulated constituent common name | CAS ¹ Number | Wastewater Standard | Nonwastewater Standard |
|--|-------------------------|------------------------------------|---|
| | | Concentration in mg/L ² | Concentration in mg/kg ³ unless noted as "mg/L TCLP" |
| Phenacetin | 62-44-2 | 0.081 | 16 |
| Phenanthrene | 85-01-8 | 0.059 | 5.6 |
| Phenol | 108-95-2 | 0.039 | 6.2 |
| 1,3-Phenylenediamine | 108-45-2 | 0.010 | 0.66 |
| Phorate | 298-02-2 | 0.021 | 4.6 |
| Phthalic acid | 100-21-0 | 0.055 | 28 |
| Phthalic anhydride | 85-44-9 | 0.055 | 28 |
| Physostigmine ⁶ | 57-47-6 | 0.056 | 1.4 |
| Physostigmine salicylate ⁶ | 57-64-7 | 0.056 | 1.4 |
| Promecarb ⁶ | 2631-37-0 | 0.056 | 1.4 |
| Pronamide | 23950-58-5 | 0.093 | 1.5 |
| Propham ⁶ | 122-42-9 | 0.056 | 1.4 |
| Propoxur ⁶ | 114-26-1 | 0.056 | 1.4 |
| Prosulfocarb ⁶ | 52888-80-9 | 0.042 | 1.4 |
| Pyrene | 129-00-0 | 0.067 | 8.2 |
| Pyridine | 110-86-1 | 0.014 | 16 |
| Safrole | 94-59-7 | 0.081 | 22 |
| Silvex/2,4,5-TP | 93-72-1 | 0.72 | 7.9 |
| 1,2,4,5-Tetrachlorobenzene | 95-94-3 | 0.055 | 14 |
| TCDDs (All Tetrachlorodibenzo-p-dioxins) | NA | 0.000063 | 0.001 |
| TCDFs (All Tetrachlorodibenzofurans) | NA | 0.000063 | 0.001 |
| 1,1,1,2-Tetrachloroethane | 630-20-6 | 0.057 | 6.0 |
| 1,1,2,2-Tetrachloroethane | 79-34-5 | 0.057 | 6.0 |
| Tetrachloroethylene | 127-18-4 | 0.056 | 6.0 |
| 2,3,4,6-Tetrachlorophenol | 58-90-2 | 0.030 | 7.4 |
| Thiodicarb ⁶ | 59669-26-0 | 0.019 | 1.4 |
| Thiophanate-methyl ⁶ | 23564-05-8 | 0.056 | 1.4 |
| Toluene | 108-88-3 | 0.080 | 10 |
| Toxaphene | 8001-35-2 | 0.0095 | 2.6 |
| Triallate ⁶ | 2303-17-5 | 0.042 | 1.4 |
| Tribromomethane/Bromoform | 75-25-2 | 0.63 | 15 |
| 1,2,4-Trichlorobenzene | 120-82-1 | 0.055 | 19 |
| 1,1,1-Trichloroethane | 71-55-6 | 0.054 | 6.0 |
| 1,1,2-Trichloroethane | 79-00-5 | 0.054 | 6.0 |
| Trichloroethylene | 79-01-6 | 0.054 | 6.0 |
| Trichloromonofluoromethane | 75-69-4 | 0.020 | 30 |
| 2,4,5-Trichlorophenol | 95-95-4 | 0.18 | 7.4 |
| 2,4,6-Trichlorophenol | 88-06-2 | 0.035 | 7.4 |
| 2,4,5-Trichlorophenoxyacetic acid/2,4,5-T | 93-76-5 | 0.72 | 7.9 |
| 1,2,3-Trichloropropane | 96-18-4 | 0.85 | 30 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 76-13-1 | 0.057 | 30 |
| Triethylamine ⁶ | 121-44-8 | 0.081 | 1.5 |
| tris-(2,3-Dibromopropyl) phosphate | 126-72-7 | 0.11 | 0.10 |
| Vernolate ⁶ | 1929-77-7 | 0.042 | 1.4 |
| Vinyl chloride | 75-01-4 | 0.27 | 6.0 |
| Xylenes-mixed isomers (sum of o-, m-, and p-xylene concentrations) | 1330-20-7 | 0.32 | 30 |
| <i>Inorganic Constituents</i> | | | |
| Antimony | 7440-36-0 | 1.9 | 1.15 mg/L TCLP |

| Regulated constituent common name | CAS ¹ Number | Wastewater Standard | Nonwastewater Standard |
|-------------------------------------|-------------------------|------------------------------------|---|
| | | Concentration in mg/L ² | Concentration in mg/kg ³ unless noted as "mg/L TCLP" |
| Arsenic | 7440-38-2 | 1.4 | 5.0 mg/L TCLP |
| Barium | 7440-39-3 | 1.2 | 21 mg/L TCLP |
| Beryllium | 7440-41-7 | 0.82 | 1.22 mg/L TCLP |
| Cadmium | 7440-43-9 | 0.69 | 0.11 mg/L TCLP |
| Chromium (Total) | 7440-47-3 | 2.77 | 0.60 mg/L TCLP |
| Cyanides (Total) ⁴ | 57-12-5 | 1.2 | 590 |
| Cyanides (Amenable) ⁴ | 57-12-5 | 0.86 | 30 |
| Fluoride ⁵ | 16984-48-8 | 35 | NA |
| Lead | 7439-92-1 | 0.69 | 0.75 mg/L TCLP |
| Mercury – Nonwastewater from Retort | 7439-97-6 | NA | 0.20 mg/L TCLP |
| Mercury – All Others | 7439-97-6 | 0.15 | 0.025 mg/L TCLP |
| Nickel | 7440-02-0 | 3.98 | 11. mg/L TCLP |
| Selenium ⁷ | 7782-49-2 | 0.82 | 5.7 mg/L TCLP |
| Silver | 7440-22-4 | 0.43 | 0.14 mg/L TCLP |
| Sulfide ⁵ | 18496-25-8 | 14 | NA |
| Thallium | 7440-28-0 | 1.4 | 0.20 mg/L TCLP |
| Vanadium ⁵ | 7440-62-2 | 4.3 | 1.6 mg/L TCLP |
| Zinc ⁵ | 7440-66-6 | 2.61 | 4.3 mg/L TCLP |

NA means not applicable.

¹ CAS means Chemical Abstract Services. When the waste code or regulated constituents are described as a combination of a chemical with its salts or esters, the CAS number is given for the parent compound only.

² Concentration standards for wastewaters are expressed in mg/L and are based on analysis of composite samples.

³ Except for metals (EP or TCLP) and cyanides (total and amenable) the nonwastewater treatment standards expressed as a concentration were established, in part, based upon incineration in units operated according to the technical requirements of subch. O of ch. NR 664 or subch. O of ch. NR 665, or based upon combustion in fuel substitution units operating according to applicable technical requirements. A facility may comply with these treatment standards according to s. NR 668.40 (4). All concentration standards for nonwastewaters are based on analysis of grab samples.

⁴ Both cyanides (total) and cyanides (amenable) for nonwastewaters are to be analyzed using Method 9010C or 9012B, found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA SW-846, incorporated by reference in s. NR 660.11, with a sample size of 10 grams and a distillation time of one hour and 15 minutes.

⁵ These constituents are not "underlying hazardous constituents" in characteristic wastes, according to the definition at s. NR 668.02 (9).

⁶ Between August 26, 1996, and March 4, 1998, these constituents are not "underlying hazardous constituents" as defined at s. NR 668.02 (9).

⁷ This constituent is not an underlying hazardous constituent as defined at s. NR 668.02 (9) because its UTS level is greater than its TC level, thus a treatment selection waste would always be characteristically hazardous, unless it is treated to below its characteristic level.

⁸ This standard is temporarily deferred for soil exhibiting a hazardous characteristic due to D004 to D011 only.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. (Table) Register July 2017 No. 739, eff. 8-1-17.

NR 668.49 Alternative LDR treatment standards for contaminated soil. (1) A person shall 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 a person is required to 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 a person |
|--|--------------------------------------|--|---------------------------|
| Applied to the listed waste when it contaminated the soil*. | Apply to the listed waste now. | | Shall 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. | Shall 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 ch. NR 668 Appendix VII. To determine the date a listed hazardous waste contaminated a volume of soil, use the last date the listed hazardous waste was placed into the land disposal unit or, in the case of an accidental spill, the date of the spill.

(2) Prior to land disposal, contaminated soil identified by sub. (1) as needing to comply with LDRs shall be treated according to the applicable treatment standards specified in sub. (3) or according to the universal treatment standards specified in s. NR 668.48 applicable to the contaminating listed hazardous waste or the applicable characteristic of hazardous waste if the soil is characteristic, or both. The treatment standards specified in sub. (3) and

the universal treatment standards may be modified through a treatment variance approved according to 40 CFR 268(a) to (g).

(3) Prior to land disposal, contaminated soil identified by sub. (1) as needing to comply with LDRs shall be treated according to all the standards specified in this subsection or according to the universal treatment standards specified in s. NR 668.48.

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

1. For non-metals except carbon disulfide, cyclohexanone and methanol, treatment shall achieve 90% reduction in total constituent concentrations, except as provided by subd. 3.

2. For metals and carbon disulfide, cyclohexanone and methanol, treatment shall achieve 90% reduction in constituent concentrations as measured in leachate from the treated media (tested according to the TCLP) or 90 % reduction in total constituent concentrations (when a metal removal treatment technology is used), except as provided by subd. 3.

3. When treatment of any constituent subject to treatment to a 90% reduction standard would result in a concentration less than 10 times the universal treatment standard for that constituent, then treatment to achieve constituent concentrations less than 10 times the universal treatment standard is not required. Universal treatment standards are identified in s. NR 668.48, Table UTS.

(b) *Soils that exhibit the characteristic of ignitability, corrosivity or reactivity.* In addition to the treatment required by par. (a), prior to land disposal, soils that exhibit the characteristic of ignitability, corrosivity or reactivity shall be treated to eliminate these characteristics.

(c) *Soils that contain nonanalyzable constituents.* In addition to the treatment requirements of pars. (a) and (b), prior to land disposal, the following treatment is required for soils that contain nonanalyzable constituents:

1. For soil that contains only analyzable and nonanalyzable organic constituents, the analyzable organic constituents shall be treated to the levels specified in pars. (a) and (b).

2. Soil that contains only nonanalyzable constituents shall be treated by the method or methods specified in s. NR 668.42 for the waste contained in the soil.

(4) When applying the soil treatment standards in sub. (3), constituents subject to treatment are any constituents listed in s. NR 668.48, Table UTS that are reasonably expected to be present in any given volume of contaminated soil, except fluoride, selenium, sulfides, vanadium, and zinc, and that are present at concentrations greater than ten times the universal treatment standard. PCBs are not a constituent subject to treatment in any given volume of soil which exhibits the toxicity characteristic solely because of the presence of metals.

(5) Treatment residuals from treating contaminated soil identified by sub. (1) as needing to comply with LDRs shall be managed as follows:

(a) Soil residuals are subject to the treatment standards of this section.

(b) Non-soil residuals are subject to all of the following requirements:

1. Soils contaminated by listed hazardous waste are subject to the standards applicable to the listed hazardous waste under ch. 291, Stats., and chs. NR 660 to 673.

2. Soils that exhibit a characteristic of hazardous waste, if the non-soil residual also exhibits a characteristic of hazardous waste, are subject to the treatment standards applicable to the characteristic hazardous waste.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; correction in (5) (b) 1. made under s. 13.93 (2m) (b) 7., Stats., Register October 2007 No. 622; CR 16-007: am. (1) Table, (4) Register July 2017 No. 739, eff. 8-1-17.

Subchapter E — Prohibitions on Storage

NR 668.50 Prohibitions on storage of restricted wastes. (1) Except as provided in this section, the storage of

hazardous wastes restricted from land disposal under this chapter or 42 USC 6924 is prohibited, unless all of 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 a generator complies with the requirements in s. NR 662.034 and chs. NR 664 and 665.

(b) An owner or 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 all of the following additional conditions are met:

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 or operator shall comply with the operating record requirements specified in s. NR 664.0073 or s. NR 665.0073.

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

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

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

(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 40 CFR 268.5, an approved 40 CFR 268.6 petition, or a national capacity variance under subch. C), the prohibition in sub. (1) does not apply during the period of the exemption.

(5) The prohibition in sub. (1) does not apply to hazardous wastes that meet the treatment standards specified under ss. NR 668.41, 668.42 and 668.43 or the treatment standards specified under the variance in 40 CFR 268.44, or, where treatment standards have not been specified, is in compliance with the applicable prohibitions specified in s. NR 668.32 or s. 291.05 (6), Stats.

(6) Liquid hazardous wastes containing polychlorinated biphenyls (PCBs) at concentrations greater than or equal to 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 year of the date when the wastes are first placed into storage. The provisions of sub. (3) do not apply to PCB wastes prohibited under s. NR 668.32.

(7) The prohibition and requirements in this section do not apply to hazardous remediation wastes stored in a staging pile approved pursuant to s. NR 664.0554.

History: CR 05-032: cr. Register July 2006 No. 607, eff. 8-1-06; CR 16-007: am. (7) Register July 2017 No. 739, eff. 8-1-17.