Chapter NR 668

HAZARDOUS WASTE LAND DISPOSAL RESTRICTIONS

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 subds. 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) Thermostats 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.

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 circumvent 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.

(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.

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 meets the treatment standards in s. NR 668.40, 668.45, or 668.49, or if the hazardous waste shall be treated before land disposal. 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. It is not necessary to test hazardous waste, or soil contaminated by hazardous waste, which is treated under s. NR 668.40 and s. NR 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 standard, then, 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). 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. If the contaminated soil does not meet the applicable treatment standards, then the notification shall include the following certification, signed by an authorized representative:

I certify under penalty of law that I personally have examined this contaminated soil and it [does/does not] contain listed hazardous waste and [does/does not] exhibit a characteristic of hazardous waste and requires treatment to meet the soil treatment standards as provided by s. NR 668.49 (3) [or 40 CFR 268.49(c)].

(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 s. NR 668.07 (1) (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 no−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 par. (d). 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	✓		✓	
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 (i.e., 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 submit the certification in par. (d), and a notice which includes the information in par. (c), except the manifest number, to the department. 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.

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. 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 files and sent to the department. 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. However, the generator or treater need only notify the department on an annual basis if such changes occur. The notification and certification shall be sent to the department annually and shall be received by the department no later that December 31.

(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.

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 con-

tinue 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 668.30 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 s. NR 668.44.

(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.

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, F02l, 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 applicable alternative treatment standards established pursuant to a petition granted under s. NR 668.44

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

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 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) 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.

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 661are 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 s. NR 668.44.

(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.

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 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) 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.

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 s. NR 668.44.

(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.

(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.

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. (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 s. NR 668.44.

(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.

(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.

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 1310, the extraction procedure toxicity test. For wastes covered by a technology standard, the wastes may be land disposed after being treated using that specified technology or an equivalent treatment technology approved by the 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.

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
		Silver	7440–22–4	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	CARBN; or CMBST	0.066 and meet s. NR 668.48 standards[8]
		beta−BHC	319−85−7	CARBN; or CMBST	0.066 and meet s. NR 668.48standards[8]
		delta−BHC	319−86−8	CARBN; or CMBST	0.066 and meet s. NR 668.48 standards[8]
		gamma−BHC (Lindane)	58−89−9	CARBN; 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−Dichloro-benzene)	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 stan-dards[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−Dichloroethyl-ene	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 stan-dards[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].	Hexachloroben-zene	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].	Hexachlorobuta-diene	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 stan-dards[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].	Tetrachloroethyl-ene	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−Trichloro-phenol	95−95−4	0.18 and meet s. NR 668.48 stan-dards[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−Trichloro-phenol	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 stan-dards[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, trichloromonofluoromethane, 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
		Trichloromonofluoromethane	75−69−4	0.020	30
		Xylenes−mixed isomers(sum of o−, m−, and p−xylene concentrations)	1330−20−7	0.32	30
	F003 and/or F005 solvent wastes that 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	CMBST[11]	CMBST[11]
		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	6.0
		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	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
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 Pentachlorodi-benzo−p−dioxins)	NA	0.000063	0.001
		PeCDFs (All Pentachlorodi-benzofurans)	NA	0.000035	0.001
		Pentachlorophenol	87−86−5	0.089	7.4
		TCDDs (All Tetrachlorodi-benzo−p−dioxins)	NA	0.000063	0.001
		TCDFs (All Tetrachlorodi-benzofurans)	NA	0.000063	0.001
		2,4,5−Trichloro-phenol	95−95−4	0.18	7.4
		2,4,6−Trichloro-phenol	88−06−2	0.035	7.4
		2,3,4,6−Tetra-chlorophenol	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 (i.e., 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)fluoran-thene (difficult to distinguish from benzo(k)fluoran-thene)	205−99−2	0.11	6.8
		Benzo(k)fluoran-thene (difficult to distinguish from benzo(b)fluoran-thene)	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)anthra-cene	53−70−3	0.055	8.2
		2−4−Dimethyl phe-nol	105−67−9	0.036	14
		Fluorene	86−73−7	0.059	3.4
		Hexachlorodiben-zo−p−dioxins	NA	0.000063, or CMBST[11]	0.001, or CMBST[11]
		Hexachlorodiben-zofurans	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
		Pentachlorodiben-zo−p−dioxins	NA	0.000063, or CMBST[11]	0.001, or CMBST[11]
		Pentachlorodiben-zofurans	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
		Tetrachlorodiben-zo−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 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 and/or F028].	Acenaphthylene	208−96−8	0.059	3.4
		Acenaphthene	83−32−9	0.059	3.4
		Acetone	67−64−1	0.28	160
		Acetonitrile	75−05−8	5.6	NA
		Acetophenone	96−86−2	0.010	9.7
		2−Acetylamino-fluorene	53−96−3	0.059	140
		Acrolein	107−02−8	0.29	NA
		Acrylonitrile	107−13−1	0.24	84
		Aldrin	309−00−2	0.021	0.066
		4−Aminobiphenyl	92−67−1	0.13	NA
		Aniline	62−53−3	0.81	14
		Anthracene	120−12−7	0.059	3.4
		Aramite	140−57−8	0.36	NA

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]
		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
		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(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
		p−Chloro−m−cresol	59−50−7	0.018	14
		Chloromethane (Methyl chloride)	74−87−3	0.19	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]
		2−Chloronaphthalene	91−58−7	0.055	5.6
		2−Chlorophenol	95−57−8	0.044	5.7
		3−Chloropropylene	107−05−1	0.036	30
		Chrysene	218−01−9	0.059	3.4
		o−Cresol	95−48−7	0.11	5.6
		m−Cresol(difficult to distinguish from p−cresol)	108−39−4	0.77	5.6
		p−Cresol(difficult to distinguish from m−cresol)	106−44−5	0.77	5.6
		Cyclohexanone	108−94−1	0.36	NA
		1,2−Dibromo−3−chloropropane	96−12−8	0.11	15
		Ethylene dibromide (1,2−Dibromoethane)	106−93−4	0.028	15
		Dibromomethane	74−95−3	0.11	15
		2,4−D (2,4−Dichlorophenoxyacetic acid)	94−75−7	0.72	10
		o,p'−DDD	53−19−0	0.023	0.087
		p,p'−DDD	72−54−8	0.023	0.087
		o,p'−DDE	3424−82−6	0.031	0.087
		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
		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

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]
		Diethyl phthalate	84−66−2	0.20	28
		2−4−Dimethyl phenol	105−67−9	0.036	14
		Dimethyl phthalate	131−11−3	0.047	28
		Di−n−butyl phthalate	84−74−2	0.057	28
		1,4−Dinitrobenzene	100−25−4	0.32	2.3
		4,6−Dinitro−o−cresol	534−52−1	0.28	160
		2,4−Dinitrophenol	51−28−5	0.12	160
		2,4−Dinitrotoluene	121−14−2	0.32	140
		2,6−Dinitrotoluene	606−20−2	0.55	28
		Di−n−octyl phthalate	117−84−0	0.017	28
		Di−n−propylnitrosamine	621−64−7	0.40	14
		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
		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

Waste code	Waste description and treatment/Regulatory subcategory[1]	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS[2] number	Concentration in mg/L[3]; or Technology Code[4]	Concentration in mg/kg[5] unless noted as "mg/L TCLP"; or Technology Code[4]
		1,2,3,4,6,7,8–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 methansulfonate	66–27–3	0.018	NA
		Methyl parathion	298–00–0	0.014	4.6
		Naphthalene	91–20–3	0.059	5.6
		2–Naphthylamine	91–59–8	0.52	NA
		p–Nitroaniline	100–01–6	0.028	28
		Nitrobenzene	98–95–3	0.068	14

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]
		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−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	0.0025
		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
		Phorate	298−02−2	0.021	4.6
		Phthalic anhydride	85−44−9	0.055	NA
		Pronamide	23950−58−5	0.093	1.5
		Pyrene	129−00−0	0.067	8.2
		Pyridine	110−86−1	0.014	16
		Safrole	94−59−7	0.081	22
		Silvex (2,4,5−TP)	93−72−1	0.72	7.9
		2,4,5−T	93−76−5	0.72	7.9
		1,2,4,5−Tetrachlorobenzene	95−94−3	0.055	14
		TCDDs (All Tetrachlorodibenzo−p−dioxins)	NA	0.000063	0.001

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 Tetrachlorodi-benzofurans)	NA	0.000063	0.001
		1,1,1,2−Tetra-chloroethane	630−20−6	0.057	6.0
		1,1,2,2−Tetra-chloroethane	79−34−6	0.057	6.0
		Tetrachloroethyl-ene	127−18−4	0.056	6.0
		2,3,4,6−Tetra-chlorophenol	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−Trichloro-benzene	120−82−1	0.055	19
		1,1,1−Trichloro-ethane	71−55−6	0.054	6.0
		1,1,2−Trichloro-ethane	79−00−5	0.054	6.0
		Trichloroethylene	79−01−6	0.054	6.0
		Trichloromono-fluoromethane	75−69−4	0.020	30
		2,4,5−Trichloro-phenol	95−95−4	0.18	7.4
		2,4,6−Trichloro-phenol	88−06−2	0.035	7.4
		1,2,3−Trichloropro-pane	96−18−4	0.85	30
		1,1,2−Tri-chloro−1,2,2−trifluo-roethane	76−13−1	0.057	30
		tris(2,3−Dibromo-propyl) 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
		Cyanides (Amena-ble)[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

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]
		Silver	7440−22−4	0.43	0.14 mg/L TCLP
		Sulfide	8496−25−8	14	NA
		Thallium	7440−28−0	1.4	NA
		Vanadium	7440−62−2	4.3	NA
K001	Bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol.	Naphthalene	91−20−3	0.059	5.6
		Pentachlorophenol	87−86−5	0.089	7.4
		Phenanthrene	85−01−8	0.059	5.6
		Pyrene	129−00−0	0.067	8.2
		Toluene	108−88−3	0.080	10
		Xylenes−mixed isomers(sum of o−, m−, and p−xylene concentrations)	1330−20−7	0.32	30
		Lead	7439−92−1	0.69	0.75 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
		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

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		Common name	CAS[2] number	Concentration in mg/L[3]; or Technology Code[4]	Concentration in mg/kg[5] unless noted as "mg/L TCLP"; or Technology Code[4]
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
		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

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		Common name	CAS[2] number	Concentration in mg/L[3]; or Technology Code[4]	Concentration in mg/kg[5] unless noted as "mg/L TCLP"; or Technology Code[4]
		p−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
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

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]
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
		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

Waste code	Waste description and treatment/Regulatory subcategory[1]	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS[2] number	Concentration in mg/L[3]; or Technology Code[4]	Concentration in mg/kg[5] unless noted as "mg/L TCLP"; or Technology Code[4]
		1,2,4−Trichloro-benzene	120−82−1	0.055	19
K031	By−product salts generated in the production of MSMA and cacodylic acid.	Arsenic	7440−38−2	1.4	5.0 mg/L TCLP
K032	Wastewater treatment sludge from the production of chlordane.	Hexachlorocyclo-pentadiene	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.	Hexachlorocyclo-pentadiene	77−47−4	0.057	2.4
K034	Filter solids from the filtration of hexa-chlorocyclopentadiene in the production of chlordane.	Hexachlorocyclo-pentadiene	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)anthra-cene	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)py-rene	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 diethyl-phosphorodithioic acid in the production of phorate.	NA	NA	CARBN; or CMBST	CMBST
K040	Wastewater treatment sludge from the production of phorate.	Phorate	298−02−2	0.021	4.6
K041	Wastewater treatment sludge from the production of toxaphene.	Toxaphene	8001−35−2	0.0095	2.6
K042	Heavy ends or distillation residues from the distillation of tetrachlorobenzene in the production of 2,4,5−T.	o−Dichlorobenzene	95−50−1	0.088	6.0
		p−Dichlorobenzene	106−46−7	0.090	6.0

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]
		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
		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

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]
		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	Slop oil emulsion solids from the petroleum refining industry.	Anthracene	120−12−7	0.059	3.4
		Benzene	71−43−2	0.14	10
		Benzo(a)pyrene	50−32−8	0.061	3.4
		bis(2−Ethylhexyl) phthalate	117−81−7	0.28	28
		Carbon disulfide	75−15−0	3.8	NA
		Chrysene	2218−01−9	0.059	3.4
		2,4−Dimethylphe-nol	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 petro-leum 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
		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

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]
		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
		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

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]
		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 prepurified 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 prepurified brine is not used.) nonwastewaters that are not residues from RMERC.	Mercury	7439−97−6	NA	0.025 mg/L TCLP
	All K071 wastewaters.	Mercury	7439−97−6	0.15	NA
K073	Chlorinated hydrocarbon waste from the purification step of the diaphragm cell process using graphite anodes in chlorine production.	Carbon tetrachloride	56−23−5	0.057	6.0
		Chloroform	67−66−3	0.046	6.0
		Hexachloroethane	67−72−1	0.055	30
		Tetrachloroethylene	127−18−4	0.056	6.0
		1,1,1−Trichloroethane	71−55−6	0.054	6.0
K083	Distillation bottoms from aniline production.	Aniline	62−53−3	0.81	14
		Benzene	71−43−2	0.14	10
		Cyclohexanone	108−94−1	0.36	NA
		Diphenylamine (difficult to distinguish from diphenylnitrosamine)	122−39−4	0.92	13
		Diphenylnitrosamine (difficult to distinguish from diphenylamine)	86−30−6	0.92	13
		Nitrobenzene	98−95−3	0.068	14
		Phenol	108−95−2	0.039	6.2
		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

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]
		m−Dichloroben-zene	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
		Hexachloroben-zene	118−74−1	0.055	10
		Total PCBs(sum of all PCB isomers, or all Aroclors)	1336−36−3	0.10	10
		Pentachloroben-zene	608−93−5	0.055	10
		1,2,4,5−Tetra-chlorobenzene	95−94−3	0.055	14
		1,2,4−Trichloro-benzene	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 phtha-late	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 phthal-ate	84−74−2	0.057	28
		Di−n−octyl phthal-ate	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−Trichloro-ethane	71−55−6	0.054	6.0
		Trichloroethylene	79−01−6	0.054	6.0
		Xylenes−mixed isomers(sum of o−, m−, and p−xylene concentrations)	1330−20−7	0.32	30
		Chromium (Total)	7440−47−3	2.77	0.60 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

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
		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
		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

Waste code	Waste description and treatment/Regulatory subcategory[1]	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS[2] number	Concentration in mg/L[3]; or Technology Code[4]	Concentration in mg/kg[5] unless noted as "mg/L TCLP"; or Technology Code[4]
		Phthalic anhydride (measured as Phthalic acid or Terephthalic acid)	85−44−9	0.055	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
		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

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]
		PeCDFs (All Pentachlorodi-benzofurans)	NA	0.000035	0.001
		TCDDs (All Tetrachlorodi-benzo−p−dioxins)	NA	0.000063	0.001
		TCDFs (All Tetrachlorodi-benzofurans)	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−Trichloro-phenol	95−95−4	0.18	7.4
		2,4,6−Trichloro-phenol	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

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]
	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 dinitrotolune.	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 phosgenation of toluenediamine.	NA	NA	CARBN; or CMBST	CMBST
K117	Wastewater from the reactor vent gas scrubber in the production of ethylene dibromide via bromination of ethene.	Methyl bromide (Bromomethane)	74−83−9	0.11	15
		Chloroform	67−66−3	0.046	6.0
		Ethylene dibromide (1,2−Dibromoethane)	106−93−4	0.028	15
K118	Spent absorbent solids from purification of ethylene dibromide in the production of ethylene dibromide via bromination of ethene.	Methyl bromide (Bromomethane)	74−83−9	0.11	15
		Chloroform	67−66−3	0.046	6.0
		Ethylene dibromide (1,2−Dibromoethane)	106−93−4	0.028	15
K123	Process wastewater (including supernates, filtrates and washwaters) from the production of ethylenebisdithiocarbamic acid and its salts.	NA	NA	CMBST; or CHOXD fb (BIODG or CARBN)	CMBST

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]
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))	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

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]
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
		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.	Benz(a)anthracene	56−55−3	0.059	3.4
		Benzo(a)pyrene	50−32−8	0.061	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]
		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
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

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]
		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
		o−Phenylenediamine	95−54−5	0.056	5.6
		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
		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

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]
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
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

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	11.0 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 refiing 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−Hepta-chlorodibenzofuran (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−Hepta-chlorodibenzofuran (1,2,3,4,7,8,9−HpC-DF)	55673−89−7	0.000035 or CMBST[11]	0.0025 or CMBST[11]
		HxCDDs (All Hexachlorodi-benzo−p−dioxins)	34465−46−8	0.000063 or CMBST[11]	0.001 or CMBST[11]
		HxCDFs (All Hexachlorodi-benzofurans)	55684−94−1	0.000063 or CMBST[11]	0.001 or CMBST[11]
		1,2,3,4,6,7,8,9−Oct-achlorodibenzo−p−dioxin (OCDD)	3268−87−9	0.000063 or CMBST[11]	0.005 or CMBST[11]
		1,2,3,4,6,7,8,9−Oct-achlorodi-benzofuran (OCDF)	39001−02−0	0.000063 or CMBST[11]	0.005 or CMBST[11]
		PeCDDs (All Pentachlorodi-benzo−p−dioxins	36088−22−9	0.000063 or CMBST[11]	0.001 or CMBST[11]
		PeCDFs (All Pentachlorodi-benzofurans)	30402−15−4	0.000035 or CMBST[11]	0.001 or CMBST[11]
		TCDDs (All tetrachlorodi-benzo−p−dioxins	41903−57−5	0.000063 or CMBST[11]	0.001 or CMBST[11]
		TCDFs (All tetrachlorodi-benzofurans)	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. All K175 wastewaters	Mercury [12]	7438−97−6	NA	0.025 mg/L TCLP
		pH [12]		NA	pH≤6.0
		Mercury	7438−97−6	0.15	NA

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]
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−*p*−dioxin (1,2,3,4,6,7,8−HpCDD)	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−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]
		TCDDs (All tetrachlorodibenzo−*p*−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]
		Thallium	7440−28−0	1.4	0.20 mg/L TCLP
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

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]
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
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

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]
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
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

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]
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
P062	Hexaethyl tetraphosphate	Hexaethyl tetra-phosphate	757−58−4	CARBN; or CMBST	CMBST
P063	Hydrogen cyanide	Cyanides (Total)[7]	57−12−5	1.2	590
		Cyanides (Amena-ble)[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

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]
P068	Methyl hydrazine	Methyl hydrazine	60−34−4	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
P069	2−Methyllactonitrile	2−Methyllactonitrile	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
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	Octamethylpyrophosphoramide	Octamethylpyrophosphoramide	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

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]
	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
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

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]
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_3P_2, when present at concentrations greater than 10%	Zinc Phosphide	1314–84–7	CHOXD; CHRED; or CMBST	CHOXD; CHRED; or CMBST
P123	Toxaphene	Toxaphene	8001–35–2	0.0095	2.6
P127	Carbofuran	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

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]
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−Acetylamino-fluorene	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
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

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]
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
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

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]
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
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

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]
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
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

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]
U087	O,O−Diethyl S−methyldithiophosphate	O,O−Diethyl S−methyldi-thiophosphate	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'−Dimethoxy-benzidine	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−Dimethylami-noazobenzene	60−11−7	0.13	CMBST
U094	7,12−Dimethylbenz(a)anthracene	7,12−Dimethyl-benz(a)anthracene	57−97−6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U095	3,3'−Dimethylbenzidine	3,3'−Dimethylben-zidine	119−93−7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U096	alpha, alpha−Dimethyl benzyl hydroperoxide	alpha, alpha−Dime-thyl benzyl hydro-peroxide	80−15−9	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U097	Dimethylcarbamoyl chloride	Dimethyl-carbamoyl chloride	79−44−7	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U098	1,1−Dimethylhydrazine	1,1−Dimethylhy-drazine	57−14−7	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U099	1,2−Dimethylhydrazine	1,2−Dimethylhy-drazine	540−73−8	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U101	2,4−Dimethylphenol	2,4−Dimethylphe-nol	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 phthal-ate	117−84−0	0.017	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]
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
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	Trichloromonofluoromethane	Trichloromonofluoromethane	75−69−4	0.020	30
U122	Formaldehyde	Formaldehyde	50−00−0	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U123	Formic acid	Formic acid	64−18−6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST

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]
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	Hexachloroben-zene	118−74−1	0.055	10
U128	Hexachlorobutadiene	Hexachlorobuta-diene	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 (Lin-dane)	58−89−9	0.0017	0.066
U130	Hexachlorocyclopentadiene	Hexachlorocyclo-pentadiene	77−47−4	0.057	2.4
U131	Hexachloroethane	Hexachloroethane	67−72−1	0.055	30
U132	Hexachlorophene	Hexachlorophene	70−30−4	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U133	Hydrazine	Hydrazine	302−01−2	CHOXD; CHRED; CARBN; BIODG; or CMBST	CHOXD; CHRED; or CMBST
U134	Hydrogen fluoride	Fluoride (measured in wastewaters only)	16964−48−8	35	ADGAS fb NEUTR; or NEUTR
U135	Hydrogen Sulfide	Hydrogen Sulfide	7783−06−4	CHOXD; CHRED, or CMBST	CHOXD; CHRED; or CMBST.
U136	Cacodylic acid	Arsenic	7440−38−2	1.4	5.0 mg/L TCLP
U137	Indeno(1,2,3−c,d)pyrene	Indeno(1,2,3−c,d)p-yrene	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

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]
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
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

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]
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
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

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]
U185	Pentachloronitrobenzene	Pentachloronitro-benzene	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 Ter-ephthalic 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
U192	Pronamide	Pronamide	23950−58−5	0.093	1.5
U193	1,3−Propane sultone	1,3−Propane sul-tone	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−Tetra-chlorobenzene	95−94−3	0.055	14
U208	1,1,1,2−Tetrachloroethane	1,1,1,2−Tetra-chloroethane	630−20−6	0.057	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]
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
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

Waste code	Waste description and treatment/Regulatory subcategory[1]	Regulated hazardous constituent		Wastewaters	Nonwastewaters
		Common name	CAS[2] number	Concentration in mg/L[3]; or Technology Code[4]	Concentration in mg/kg[5] unless noted as "mg/L TCLP"; or Technology Code[4]
U238	Urethane (Ethyl carbamate)	Urethane (Ethyl carbamate)	51−79−6	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U239	Xylenes	Xylenes−mixed isomers(sum of o−, m−, and p−xylene concentrations)	1330−20−7	0.32	30
U240	2,4−D (2,4−Dichlorophenoxyacetic acid)	2,4−D (2,4−Dichlorophen-oxyacetic 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	Hexachloropropy-lene	1888−71−7	0.035	30
U244	Thiram	Thiram	137−26−8	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U246	Cyanogen bromide	Cyanogen bromide	506−68−3	CHOXD; WETOX; or CMBST	CHOXD; WETOX; or CMBST
U247	Methoxychlor	Methoxychlor	72−43−5	0.25	0.18
U248	Warfarin, & salts, when present at concentrations of 0.3% or less	Warfarin	81−81−2	(WETOX or CHOXD) fb CARBN; or CMBST	CMBST
U249	Zinc phosphide, Zn_3P_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

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]
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	101−44−8	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 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 9010 or 9012, 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) (c) and (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 found in s. NR 675.22 until June 1, 1998 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 floculating, 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 crystalization; (6) ultrafiltration and/or (7) simple precipitation (i.e., crystalization)—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:	Resmelting in high temperature metal recovery units for the purpose of recovery of zinc.
STABL:	Stabilization with the following reagents (or waste reagents) or combinations of reagents: (1) Portland cement; or (2) lime/pozzolans (e.g., fly ash and cement kiln dust)—this does not preclude the addition of reagents (e.g., iron salts, silicates, and clays) designed to enhance the set/cure time 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 EPA administrator 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 EPA administrator 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 EPA administrator 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.

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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 (½ 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]
b. Thermal Desorption: Heating in an enclosed chamber under either oxidizing or nonoxidizing atmospheres at sufficient temperature and residence time to vaporize hazardous contaminants from contaminated surfaces and surface pores and to remove the contaminants from the heating chamber in a gaseous exhaust gas[7].	All Debris: Obtain an "Equivalent Technology" approval under s. NR 668.42 (2)8; treated debris shall be separated from treatment residuals using simple physical or mechanical means[9], and, prior to further treatment, the residue shall meet the waste−specific treatment standards for organic compounds in the waste contaminating the debris. 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.	All Debris: Metals other than mercury.
B. Destruction Technologies:		
1. Biological Destruction (Biodegradation): Removal of hazardous contaminants from debris surfaces and surface pores in an aqueous solution and biodegration of organic or nonmetallic inorganic compounds (i.e., inorganics that contain phosphorus, nitrogen or sulfur) in units operated under either aerobic or anaerobic conditions.	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 means[9], and, prior to further treatment, the residue shall meet the waste−specific treatment standards for organic compounds in the waste contaminating the debris. Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris shall be no more than 1.2 cm (½ inch) in one dimension (i.e., thickness limit)[5], except that this thickness limit may be waived under the "Equivalent Technology" approval.	All Debris: Metal contaminants.
2. Chemical Destruction		
a. Chemical Oxidation: Chemical or electolytic 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 efficiency[4]. Chemical oxidation specifically includes what is referred to as alkaline chlorination.	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 means[9], and, prior to further treatment, the residue shall meet the waste−specific treatment standards for organic compounds in the waste contaminating the debris. Brick, Cloth, Concrete, Paper, Pavement, Rock, Wood: Debris shall be no more than 1.2 cm (½ inch) in one dimension (i.e., thickness limit)[5], except that this thickness limit may be waived under the "Equivalent Technology" approval.	All Debris: Metal contaminants.
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 efficiency[4].	Same as above	Same as above.
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.	Treated debris shall be separated from treatment residuals using simple physical or mechanical means[9], and, prior to further treatment, the residue shall meet the waste−specific treatment standards for organic compounds in the waste contaminating the debris.	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.

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 resistent 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 FO20, FO21, FO22, FO23, FO26 and FO27.

[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.

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 nonwastewater and wastewater treatment standard levels, that are used to regulate most prohibited hazardous wastes with numerical limits. For determining compliance with treatment standards for underlying hazardous constituents as defined in 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"
Organic Constituents			
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
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
Chlorobenzene	108−90−7	0.057	6.0

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"
Chlorobenzilate	510−15−6	0.10	NA
2−Chloro−1,3−butadiene	126−99−8	0.057	0.28
Chlorodibromomethane	124−48−1	0.057	15
Chloroethane	75−00−3	0.27	6.0
bis(2−Chloroethoxy)methane	111−91−1	0.036	7.2
bis(2−Chloroethyl)ether	111−44−4	0.033	6.0
Chloroform	67−66−3	0.046	6.0
bis(2−Chloroisopropyl)ether	39638−32−9	0.055	7.2
p−Chloro−m−cresol	59−50−7	0.018	14
2−Chloroethyl vinyl ether	110−75−8	0.062	NA
Chloromethane/Methyl chloride	74−87−3	0.19	30
2−Chloronaphthalene	91−58−7	0.055	5.6
2−Chlorophenol	95−57−8	0.044	5.7
3−Chloropropylene	107−05−1	0.036	30
Chrysene	218−01−9	0.059	3.4
o−Cresol	95−48−7	0.11	5.6
m−Cresol (difficult to distinguish from p−cresol)	108−39−4	0.77	5.6
p−Cresol (difficult to distinguish from m−cresol)	106−44−5	0.77	5.6
m−Cumenyl methylcarbamate[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
Diethyl phthalate	84−66−2	0.20	28
p−Dimethylaminoazobenzene	60−11−7	0.13	NA

Regulated constituent common name	CAS[1] Number	Wastewater Standard	Nonwastewater Standard
		Concentration in mg/L[2]	Concentration in mg/kg[3] unless noted as "mg/L TCLP"
2−4−Dimethyl phenol	105−67−9	0.036	14
Dimethyl phthalate	131−11−3	0.047	28
Dimetilan	644−64−4	0.056	1.4
Di−n−butyl phthalate	84−74−2	0.057	28
1,4−Dinitrobenzene	100−25−4	0.32	2.3
4,6−Dinitro−o−cresol	534−52−1	0.28	160
2,4−Dinitrophenol	51−28−5	0.12	160
2,4−Dinitrotoluene	121−14−2	0.32	140
2,6−Dinitrotoluene	606−20−2	0.55	28
Di−n−octyl phthalate	117−84−0	0.017	28
Di−n−propylnitrosamine	621−64−7	0.40	14
1,4−Dioxane	123−91−1	12.0	170
Diphenylamine (difficult to distinguish from diphenylnitrosamine)	122−39−4	0.92	13
Diphenylnitrosamine (difficult to distinguish from diphenylamine)	86−30−6	0.92	13
1,2−Diphenylhydrazine	122−66−7	0.087	NA
Disulfoton	298−04−4	0.017	6.2
Dithiocarbamates (total)[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
bis(2−Ethylhexyl) phthalate	117−81−7	0.28	28
Ethyl methacrylate	97−63−2	0.14	160
Ethylene oxide	75−21−8	0.12	NA
Famphur	52−85−7	0.017	15
Fluoranthene	206−44−0	0.068	3.4
Fluorene	86−73−7	0.059	3.4
Formetanate hydrochloride[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
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

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 methansulfonate	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
o−Phenylenediamine	95−54−5	0.056	5.6
Phorate	298−02−2	0.021	4.6
Phthalic acid	100−21−0	0.055	28
Phthalic anhydride	85−44−9	0.055	28
Physostigmine[6]	57−47−6	0.056	1.4
Physostigmine salicylate[6]	57−64−7	0.056	1.4
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]	101−44−8	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
Inorganic Constituents			
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 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 9010 or 9012, 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 selenium waste would always be characteristically hazardous, unless it is treated to below its characteristic level.

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

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

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.	. . . . . .or —	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.	. . . . . .or —	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 constituents 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.**

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 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.