

**Amendments to
Delaware's Regulations Governing Hazardous Waste**

**2018 Proposed Amendments
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Proposed Amendments to
Delaware's Regulations Governing Hazardous Waste
(DRGHW)

NOTE: For the purposes of this amendment package only those sections of the hazardous waste regulations shown herein are affected. The remaining sections of the DRGHW are not affected and are unchanged. Proposed additions are indicated with underlines, and deletions are indicated with ~~strikethroughs~~.

AMENDMENT 1:

Background:

Delaware proposes to make corrections to the Hazardous Air Pollutant Standards for Combustors in accordance with a federal rule promulgated on February 14, 2002. These proposed changes are required for state authorization. These modifications are found in 67 FR 6968-6996 and RCRA Revision Checklist 198.

Section 266.100 Applicability.

(a) The regulations of this subpart apply to hazardous waste burned or processed in a boiler or industrial furnace (as defined in §260.10 of these regulations) irrespective of the purpose of burning or processing, except as provided by paragraphs ~~(e), (d), (e)~~, (b), (c), (d), (g) and (h) of this section. In this subpart, the term "burn" means burning for energy recovery or destruction, or processing for materials recovery or as an ingredient. The emissions standards of §§ 266.104, 266.105, 266.106, and 266.107 apply to facilities operating under interim status or under a DNREC operating permit as specified in §§ 266.102 and 266.103.

(b) Integration of the MACT standards.

(1) Except as provided by paragraph (b)(2) of this section, the standards of this part no longer apply when an affected source demonstrates compliance with the maximum achievable control technology (MACT) requirements of 40 CFR Part 63, Subpart EEE, by conducting a comprehensive performance test and submitting to the EPA Administrator, with a copy to the DNREC Solid and Hazardous Waste Management Section, a Notification of Compliance under 40 CFR §§ 63.1207(j) and 63.1210(d) documenting compliance with the requirements of 40 CFR Part 63, Subpart EEE. Nevertheless, even after this demonstration of compliance with the MACT standards, DNREC hazardous waste permit conditions that were based on the standards of this part will continue to be in effect until they are removed from the permit or the permit is terminated or revoked, unless the permit expressly provides otherwise.

(2) The following standards continue to apply:

- (i) The closure requirements of §§ 266.102(e)(11) and 266.103(l);
- (ii) The standards for direct transfer of §266.111;
- (iii) The standards for regulation of residues of §266.112; and
- (iv) The applicable requirements of Subparts A through H, BB and CC of Parts 264 and 265 of these regulations.

(c) The following hazardous wastes and facilities are not subject to regulation under this subpart:

- (1) Used oil burned for energy recovery that is also a hazardous waste solely because it exhibits a characteristic of hazardous waste identified in Subpart C of Part 261 of these regulations. Such used oil is subject to regulation under Part 279 of these regulations;
- (2) Gas recovered from hazardous or solid waste landfills when such gas is burned for energy recovery;
- (3) Hazardous wastes that are exempt from regulation under §§ 261.4 and 261.6(a)(3)(iii) and (iv) of these regulations, and hazardous wastes that are subject to the special requirements for conditionally exempt small quantity generators under §261.5 of these regulations; and
- (4) Coke ovens, if the only hazardous waste burned is EPA Hazardous Waste No. K087, decanter tank tar sludge from coking operations.

(d) Owners and operators of smelting, melting, and refining furnaces (including pyrometallurgical devices such as cupolas, sintering machines, roasters, and foundry furnaces, but not including cement kilns, aggregate kilns, or halogen acid furnaces burning hazardous waste) that process hazardous waste solely for metal recovery are conditionally exempt from regulation under this subpart, except for §§ 266.101 and 266.112.

(1) To be exempt from §§ 266.102 through 266.111, an owner or operator of a metal recovery furnace or mercury recovery furnace must comply with the following requirements, except that an owner or operator of a lead or a nickel-chromium recovery furnace, or a metal recovery furnace that burns baghouse bags used to capture metallic dusts emitted by steel manufacturing, must comply with the requirements of paragraph (d)(3) of this section, and owners or operators of lead recovery furnaces that are subject to regulation under the Secondary Lead Smelting NESHAP must comply with the requirements of paragraph (h) of this section.

(i) Provide a one-time written notice to the Secretary indicating the following:

(A) The owner or operator claims exemption under this paragraph;

(B) The hazardous waste is burned solely for metal recovery consistent with the provisions of paragraph (d)(2) of this section;

(C) The hazardous waste contains recoverable levels of metals; and

(D) The owner or operator will comply with the sampling and analysis and recordkeeping requirements of this paragraph;

(ii) Sample and analyze the hazardous waste and other feedstocks as necessary to comply with the requirements of this paragraph by using appropriate methods; and

(iii) Maintain at the facility for at least three years records to document compliance with the provisions of this paragraph including limits on levels of toxic organic constituents and Btu value of the waste, and levels of recoverable metals in the hazardous waste compared to normal nonhazardous waste feedstocks.

(2) A hazardous waste meeting either of the following criteria is not processed solely for metal recovery:

(i) The hazardous waste has a total concentration of organic compounds listed in Part 261, Appendix VIII, of these regulations exceeding 500 ppm by weight, as-fired, and so is considered to be burned for destruction. The concentration of organic compounds in a waste as-generated may be reduced to the 500 ppm limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the 500 ppm limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the records required by paragraph ~~(e)(1)(iii)~~(d)(1)(iii) of this section; or

(ii) The hazardous waste has a heating value of 5,000 Btu/lb or more, as-fired, and so is considered to be burned as fuel. The heating value of a waste as-generated may be reduced to below the 5,000 Btu/lb limit by bona fide treatment that removes or destroys organic constituents. Blending for dilution to meet the 5,000 Btu/lb limit is prohibited and documentation that the waste has not been impermissibly diluted must be retained in the records required by paragraph ~~(e)(1)(iii)~~(d)(1)(iii) of this section.

(3) To be exempt from §§ 266.102 through 266.111, an owner or operator of a lead or nickel-chromium or mercury recovery furnace, ~~(except for owners or operators of lead recovery furnaces subject to regulation under the Secondary Lead Smelting NESHAP,)~~ must provide a one-time written notice to the Secretary identifying each hazardous waste burned and specifying whether the owner or operator claims an exemption for each waste under this paragraph or paragraph ~~(e)(1)(d)(1)~~ of this section. The owner or operator must comply with the requirements of paragraph ~~(e)(1)(d)(1)~~ of this section for those wastes claimed to be exempt under that paragraph and must comply with the requirements below for those wastes claimed to be exempt under this paragraph ~~(e)(3)(d)(3)~~.

(i) The hazardous wastes listed in Appendices XI, XII, and XIII, Part 266, and

baghouse bags used to capture metallic dusts emitted by steel manufacturing are exempt from the requirements of paragraph ~~(e)(1)(d)(1)~~ of this section, provided that:

(A) A waste listed in Appendix XI of this part must contain recoverable levels of lead, a waste listed in Appendix XII of this part must contain recoverable levels of nickel or chromium, a waste listed in Appendix XIII of this part must contain recoverable levels of mercury and contain less than 500 ppm of Part 261, Appendix VIII organic constituents, and baghouse bags used to capture metallic dusts emitted by steel manufacturing must contain recoverable levels of metal; and

(B) The waste does not exhibit the Toxicity Characteristic of §261.24 of these regulations for an organic constituent; and

(C) The waste is not a hazardous waste listed in Subpart D of Part 261 of these regulations because it is listed for an organic constituent as identified in Appendix VII of Part 261 of these regulations; and

(D) The owner or operator certifies in the one-time notice that hazardous waste is burned under the provisions of paragraph ~~(e)(3)(d)(3)~~ of this section and that sampling and analysis will be conducted or other information will be obtained as necessary to ensure continued compliance with these requirements. Sampling and analysis shall be conducted according to paragraph ~~(e)(1)(ii)(d)(1)(ii)~~ of this section and records to document compliance with paragraph ~~(e)(3)(d)(3)~~ of this section shall be kept for at least three years.

(ii) The Secretary may decide on a case-by-case basis that the toxic organic constituents in a material listed in Appendix XI, XII, or XIII of this part that contains a total concentration of more than 500 ppm toxic organic compounds listed in Appendix VIII, Part 261 of these regulations, may pose a hazard to human health and the environment when burned in a metal recovery furnace exempt from the requirements of this subpart. In that situation, after adequate notice and opportunity for comment, the metal recovery furnace will become subject to the requirements of this subpart when burning that material. In making the hazard determination, the Secretary will consider the following factors:

(A) The concentration and toxicity of organic constituents in the material; and

(B) The level of destruction of toxic organic constituents provided by the furnace; and

(C) Whether the acceptable ambient levels established in Appendices IV or V of this part may be exceeded for any toxic organic compound that may be emitted based on dispersion modeling to predict the maximum annual average off-site ground level concentration.

AMENDMENT 2:

Background:

Delaware proposes to make corrections to the references for testing and monitoring activities found in Methods and Innovation Rule published by EPA on June 14, 2005. These modifications are found in 70 FR 34538 - 34592 and RCRA Revision Checklist 208.

Section 260.11 References

(a) When used in Parts 260 through 268, and 122 of these regulations, the following are incorporated by reference:

- (1) ~~"ASTM Standard Test Methods for Flash Point of Liquids by Setaflash Closed Tester," ASTM Standard D 3278-78, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.~~
- (2) ~~"ASTM Standard Test Methods for Flash Point by Pensky Martens Closed Tester," ASTM Standard D 93-79 or D 93-80. D 93-80 is available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.~~
- (3) ~~"ASTM Standard Method for Analysis of Reformed Gas by Gas Chromatography," ASTM Standard D 1946-82, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.~~
- (4) ~~"ASTM Standard Test Method for Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High Precision Method)," ASTM Standard D 2382-83, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.~~
- (5) ~~"ASTM Standard Practices for General Techniques of Ultraviolet-Visible Quantitative Analysis," ASTM Standard E 169-87 available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.~~
- (6) ~~"ASTM Standard Practices for General Techniques of Infrared Quantitative Analysis," ASTM Standard E 168-88, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.~~
- (7) ~~"ASTM Standard Practice for Packed Column Gas Chromatography," ASTM Standard E 260-85, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.~~
- (8) ~~"ASTM Standard Test Method for Aromatics in Light Naphthas and Aviation Gasolines by Gas Chromatography," ASTM Standard D 2267-88, available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.~~
- (9) ~~"APTI Course 415: Control of Gaseous Emissions," EPA Publication EPA-450/2-81-005, December 1981, available from National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.~~
- (10) ~~"Flammable and Combustible Liquids Code" (1977 or 1981), available from the National Fire Protection Association, 470 Atlantic Avenue, Boston, MA 02210.~~
- (11) ~~"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 [Third Edition (November 1986), as amended by Updates I (dated July 1992), II (dated September 1994), IIA (dated August 1993), IIB (dated January 1995), IIC (dated December 1996) and IIIA (dated April 1998)]. The Third Edition of SW-846 and Updates I, II, IIA, IIB, and IIC (document number 955-001-00000-1) are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 512-1800. Update IIIA is available through EPA's Methods Information Communication Exchange (MICE) Service. MICE can be contacted by phone at (703) 821-4690. Update IIIA can also be obtained by contacting the U.S. Environmental Protection Agency, Office of Solid Waste (5307W), OSW Methods Team, 1200 Pennsylvania Ave., NW, Washington, DC, 20460. Copies of the Third Edition and all of its updates are also available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161, (703) 605-6000 or (800) 553-6847. Copies may be inspected at the~~

Library, U.S. Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460; or at the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC.

(12) ~~"Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised", October 1992, EPA Publication No. EPA-450/R-92-019, Environmental Protection Agency, Research Triangle Park, NC.~~

(13) ~~"ASTM Standard Test Methods for Preparing Refuse-Derived Fuel (RDF) Samples for Analyses of Metals," ASTM Standard E926-88, Test Method C Bomb, Acid Digestion Method, available from American Society for Testing Materials, 1916 Race Street, Philadelphia, PA 19103.~~

(14) ~~"API Publication 2517, Third Edition", February 1989, "Evaporative Loss from External Floating Roof Tanks," available from the American Petroleum Institute, 1220 L Street, Northwest, Washington, DC 20005.~~

(15) ~~"ASTM Standard Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope," ASTM Standard D 2879-92, available from American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, PA 19103.~~

(16) ~~Method 1664, Revision A, n-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel-Treated n-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry. Available at NTIS, PB99-121949, U.S. Department of Commerce, 5285 Port Royal, Springfield, Virginia 22161.~~

(b) ~~The references listed in paragraph (a) of this section are also available for inspection at the Office of the Federal Register, 800 North Capitol Street, NW, Suite 700, Washington, DC 20408. These incorporations by reference were approved by the Director of the Federal Register. These materials are incorporated as they exist on the date of approval and a notice of any change in these materials will be published in the Federal Register.~~

(a) When used in Parts 260 through 268, and 122 of these regulations, the following publications are incorporated by reference. These incorporations by reference were approved by the Director of the Federal Register pursuant to 5 U.S.C. 552(a) and 1 CFR Part 51. These materials are incorporated as they exist on the date of approval and a notice of any change in these materials will be published in the **Federal Register**. Copies may be inspected at the Library, U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW. (3403T), Washington, DC 20460, libraryhq@epa.gov; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

(b) The following materials are available for purchase from the American Society for Testing and Materials, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

(1) ASTM D 93-79 or D 93-80, "Standard Test Methods for Flash Point by Pensky-Martens Closed Cup Tester," IBR approved for § 261.21.

(2) ASTM D 1946-82, "Standard Method for Analysis of Reformulated Gas by Gas Chromatography," IBR approved for §§ 264.1033, 265.1033.

(3) ASTM D 2267–88, “Standard Test Method for Aromatics in Light Naphthas and Aviation Gasolines by Gas Chromatography,” IBR approved for § 264.1063.

(4) ASTM D 2382–83, “Standard Test Method for Heat of Combustion of Hydrocarbon Fuels by Bomb Calorimeter (High-Precision Method),” IBR approved for §§ 264.1033, 265.1033.

(5) ASTM D 2879–92, “Standard Test Method for Vapor Pressure—Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope,” IBR approved for § 265.1084.

(6) ASTM D 3278–78, “Standard Test Methods for Flash Point for Liquids by Setaflash Closed Tester,” IBR approved for § 261.21(a).

(7) ASTM E 168–88, “Standard Practices for General Techniques of Infrared Quantitative Analysis,” IBR approved for § 264.1063.

(8) ASTM E 169–87, “Standard Practices for General Techniques of Ultraviolet-Visible Quantitative Analysis,” IBR approved for § 264.1063.

(9) ASTM E 260–85, “Standard Practice for Packed Column Gas Chromatography,” IBR approved for § 264.1063.

(10) ASTM E 926–88, “Standard Test Methods for Preparing Refuse-Derived Fuel (RDF) Samples for Analyses of Metals,” Test Method C—Bomb, Acid Digestion Method.

(c) The following materials are available for purchase from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161; or for purchase from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402, (202) 512–1800.

(1) “APTI Course 415: Control of Gaseous Emissions,” EPA Publication EPA–450/2–81–005, December 1981, IBR approved for §§ 264.1035, 265.1035, 122.24, 122.25.

(2) Method 1664, Revision A, n-Hexane Extractable Material (HEM; Oil and Grease) and Silica Gel Treated n-Hexane Extractable Material (SGT–HEM; Non-polar Material) by Extraction and Gravimetry, PB99–121949, IBR approved for Part 261, appendix IX.

(3) The following methods as published in the test methods compendium known as “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW–846, Third Edition. A suffix of “A” in the method number indicates revision one (the method has been revised once). A suffix of “B” in the method number indicates revision two (the method has been revised twice). A suffix of “C” in the method number indicates revision three (the method has been revised three times). A suffix of “D” in the method number indicates revision four (the method has been revised four times).

(i) Method 0010, dated September 1986 and in the Basic Manual, IBR approved for Part 261, Appendix IX.

(ii) Method 0020, dated September 1986 and in the Basic Manual, IBR approved for Part 261, Appendix IX.

(iii) Method 0030, dated September 1986 and in the Basic Manual, IBR approved for Part 261, Appendix IX.

(iv) Method 1320, dated September 1986 and in the Basic Manual, IBR approved for Part 261, Appendix IX.

- (v) Method 1311, dated September 1992 and in Update I, IBR approved for Part 261, Appendix IX, and §§ 261.24, 268.7, 268.40.
- (vi) Method 1330A, dated September 1992 and in Update I, IBR approved for Part 261, Appendix IX.
- (vii) Method 1312 dated September 1994 and in Update II, IBR approved for Part 261, Appendix IX.
- (viii) Method 0011, dated December 1996 and in Update III, IBR approved for Part 261, Appendix IX and Part 266, Appendix IX.
- (ix) Method 0023A, dated December 1996 and in Update III, IBR approved for Part 261, Appendix IX, Part 266, Appendix IX, and § 266.104.
- (x) Method 0031, dated December 1996 and in Update III, IBR approved for Part 261, Appendix IX.
- (xi) Method 0040, dated December 1996 and in Update III, IBR approved for Part 261, Appendix IX.
- (xii) Method 0050, dated December 1996 and in Update III, IBR approved for Part 261, Appendix IX, Part 266, Appendix IX, and § 266.107.
- (xiii) Method 0051, dated December 1996 and in Update III, IBR approved for Part 261, Appendix IX, Part 266, Appendix IX, and § 266.107.
- (xiv) Method 0060, dated December 1996 and in Update III, IBR approved for Part 261, Appendix IX, § 266.106, and Part 266, Appendix IX.
- (xv) Method 0061, dated December 1996 and in Update III, IBR approved for Part 261, Appendix IX, § 266.106, and Part 266, Appendix IX.
- (xvi) Method 9071B, dated April 1998 and in Update IIIA, IBR approved for Part 261, Appendix IX.
- (xvii) Method 1010A, dated November 2004 and in Update IIIB, IBR approved for Part 261, Appendix IX.
- (xviii) Method 1020B, dated November 2004 and in Update IIIB, IBR approved for Part 261, Appendix IX.
- (xix) Method 1110A, dated November 2004 and in Update IIIB, IBR approved for § 261.22 and Part 261, Appendix IX.
- (xx) Method 1310B, dated November 2004 and in Update IIIB, IBR approved for Part 261, Appendix IX.
- (xxi) Method 9010C, dated November 2004 and in Update IIIB, IBR approved for Part 261, Appendix IX and §§ 268.40, 268.44, 268.48.
- (xxii) Method 9012B, dated November 2004 and in Update IIIB, IBR approved for Part 261, Appendix IX and §§ 268.40, 268.44, 268.48.
- (xxiii) Method 9040C, dated November 2004 and in Update IIIB, IBR approved for Part 261, Appendix IX and § 261.22.
- (xxiv) Method 9045D, dated November 2004 and in Update IIIB, IBR approved for Part 261, Appendix IX.
- (xxv) Method 9060A, dated November 2004 and in Update IIIB, IBR approved for Part 261, Appendix IX, and §§ 264.1034, 264.1063, 265.1034, 265.1063.
- (xxvi) Method 9070A, dated November 2004 and in Update IIIB, IBR approved for Part 261, Appendix IX.

(xxvii) Method 9095B, dated November 2004 and in Update IIIB, IBR approved, Part 261, Appendix IX, and §§ 264.190, 264.314, 265.190, 265.314, 265.1081, 268.32.

(d) The following materials are available for purchase from the National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101.

(1) “Flammable and Combustible Liquids Code” (1977 or 1981), IBR approved for §§ 264.198, 265.198.

(2) [Reserved]

(e) The following materials are available for purchase from the American Petroleum Institute, 1220 L Street, Northwest, Washington, DC 20005.

(1) API Publication 2517, Third Edition, February 1989, “Evaporative Loss from External Floating-Roof Tanks,” IBR approved for § 265.1084.

(2) [Reserved]

(f) The following materials are available for purchase from the Environmental Protection Agency, Research Triangle Park, NC.

(1) “Screening Procedures for Estimating the Air Quality Impact of Stationary Sources, Revised”, October 1992, EPA Publication No. EPA-450/R-92-019, IBR approved for Part 266, Appendix IX.

(2) [Reserved]

(g) The following materials are available for purchase from the Organisation for Economic Co-operation and Development, Environment Directorate, 2 rue Andre Pascal, 75775 Paris Cedex 16, France.

(1) OECD Green List of Wastes (revised May 1994), Amber List of Wastes and Red List of Wastes (both revised May 1993) as set forth in Appendix 3, Appendix 4 and Appendix 5, respectively, to the OECD Council Decision C(92)39/FINAL (Concerning the Control of Transfrontier Movements of Wastes Destined for Recovery Operations), IBR approved for § 262.89 of these regulations.

(2) [Reserved]

260.22 Petitions

(d)(1)...

(i) Does not contain the constituent or constituents (as defined in Appendix VII of Part 261 of these regulations) that caused the Secretary to list the waste, ~~using the appropriate test methods prescribed in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11;~~ or

Section 261.3 Definition of Solid Waste

(a)(2)...

(v) Rebuttable presumption for used oil. Used oil containing more than 1000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in Subpart D of Part 261 of these regulations. Persons may rebut this presumption by demonstrating that the used oil does not

contain hazardous waste (for example, ~~by using an analytical method from SW-846, Third Edition,~~ to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Appendix VIII of Part 261 of these regulations). ~~EPA Publication SW-846, Third Edition, is available for the cost of \$110.00 from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. ((202) 783-3238—document number 955-001-00000-1).~~

Section 261.21 Characteristics of Ignitability

(a)...

(1) It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume and has flash point less than 60°C (140°F), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard ~~D 93-79~~ D 93-79 or ~~D 93-80~~ D 93-80 (incorporated by reference, see §260.11), or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard ~~D 3278-78~~ D 3278-78 (incorporated by reference, see §260.11).

Section 261.22 Characteristics of Corrosivity

(a)...

(1) It is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, as determined by a pH meter using Method ~~9040~~ 9040C in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11 of these regulations.

(2) It is a liquid and corrodes steel (SAE 1020) at a rate greater than 6.35 mm (0.250 inch) per year at a test temperature of 55°C (130°F) as determined by ~~the test method specified in NACE (National Association of Corrosion Engineers) Standard TM 01-69 as standardized~~ Method 1110A in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, and as incorporated by reference in §260.11 of these regulations.

Section 261.35 Deletion of certain hazardous waste codes following equipment cleaning and replacement

(b)(2)(iii)...

(A) Rinses must be tested ~~in accordance with SW-846, Method 8290~~ by using an appropriate method.

(B) "Not detected" means ~~at or below the lower method calibration limit (MCL) in Method 8290, Table 1.~~ at or below the following lower method calibration limits (MCLs): The 2,3,7,8-TCDD-based MCL—0.01 parts per trillion (ppt), sample weight of 1000 g, IS spiking level of 1 ppt, final extraction volume of 10–50 µL. For other congeners— multiply the values by 1 for TCDF/PeCDD/PeCDF, by 2.5 for HxCDD/HxCDF/HpCDD/HpCDF, and by 5 for OCDD/OCDF.

Appendix I to Part 261 – Representative Sampling Methods

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Paragraph 4: Containerized liquid wastes - "COLIWASA" described in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods," U.S. Environmental Protection Agency, WH-5658 Office of Solid Waste, Washington, D.C. 20460.

Paragraph 5: Liquid waste in pits, ponds, lagoons, and similar reservoirs - "Pond Sampler" described in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods(1).".

Appendix II –Method 1311 Toxicity Characteristic Leaching Procedure (TCLP)

Note: The TCLP (Method 1311) is published in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11 of these regulations. [Reserved]

Appendix III –Chemical Analysis Test Methods

Note: Appropriate analytical procedures to determine whether a sample contains a given toxic constituent are specified in Chapter Two, "Choosing the Correct Procedure" found in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11 of these regulations. Prior to final sampling and analysis method selection, the individual should consult the specific section or method described in SW-846 for additional guidance on which of the approved methods should be employed for a specific sample analysis situation. [Reserved]

Section 264.190 Applicability

(a) Tank systems that are used to store or treat hazardous waste which contains no free liquids and are situated inside a building with an impermeable floor are exempted from the requirements in §264.193. To demonstrate the absence or presence of free liquids in the stored/treated waste, the following test must be used: Method ~~9095~~ 9095B (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11 of these regulations.

Section 264.1034 Test methods and procedures

(c)(1)...

(ii) Method 18 or Method 25A in 40 CFR Part 60, Appendix A for organic content. If Method 25A is used, the organic HAP used as the calibration gas must be the single organic HAP representing the largest percent by volume of the emissions. The use of Method 25A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

Section 264.1034 Test methods and procedures

(c)(1)...

(iv) Total organic mass flow rates shall be determined by the following equation:

(A) For sources utilizing Method 18.

$$E_h = Q_{std} \left\{ \sum_{i=1}^n C_i MW_i \right\} [0.0416] [10^{-6}]$$

where:

E_h = Total organic mass flow rate, kg/h;

Q_{std} = Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h;

n = Number of organic compounds in the vent gas;

C_i = Organic concentration in ppm, dry basis, of compound i in the vent gas, as determined by Method 18;

MW_i = Molecular weight of organic compound i in the vent gas, kg/kg-mol;

0.0416 = Conversion factor for molar volume, kg-mol/m³ (@ 293 K and 760 mm Hg);

10^{-6} = Conversion from ppm, ppm⁻¹.

(B) For sources utilizing Method 25A.

$$E_h = (Q)(C)(MW)(0.0416)(10^{-6})$$

Where:

E_h = Total organic mass flow rate, kg/h;

Q = Volumetric flow rate of gases entering and exiting control device, as determined by Method 2, dscm/h

C = Organic concentration in ppm, dry basis; as determined by Method 25A

MW = Molecular weight of propane, 44;

0.0416 = Conversion factor for molar volume, kg-mol/m³ (@ 293 K and 70 mm Hg);

10^{-6} = conversion from ppm.

Section 264.1034 Test methods and procedures

(d)(1)...

(iii) Each sample shall be analyzed and the total organic concentration of the sample shall be computed using Method ~~9060~~ 9060A or 8260 of SW-846 (incorporated by reference under §260.11) of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, or analyzed for its individual organic constituents.

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(f) When an owner or operator and the Secretary do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation manages a hazardous waste with organic concentrations of at least 10 ppmw based on knowledge of the waste, ~~the procedures in Method 8260 of SW-846 (incorporated by reference under §260.11) may be used to resolve the dispute~~ the dispute may be resolved by direct measurement as specified at paragraph (d)(1) of this section.

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(d)...

(2) Method ~~9060~~ 9060A ~~or 8260 of SW-846 (incorporated by reference under §260.11) of “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846, for computing total organic concentration of the sample, or analyzed for its individual organic constituents;~~ or

Appendix IX to Part 264

Ground Water Monitoring List[†]

Common Name ²	CAS RN ³	Chemical Abstracts Service Index Name ⁴	Suggested Methods ⁵	PQL(Tg/L) ⁶
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Acenaphthene	83-32-9	Acenaphthylene, 1,2-dihydro-	8100 8270	200 10
Acenaphthylene	208-96-8	Acenaphthylene	8100	200
-			8270	10
Acetone	67-64-1	2-Propanone	8240	100
Acetophenone	98-86-2	Ethanone, 1-phenyl-	8270	10
Acetonitrile; Methyl cyanide	75-05-8	Acetonitrile	8015	100
2-Acetylaminofluorene; —2-AAF	53-96-3	Acetamide, N-9H-fluoren-2-yl-	8270	10
Acrolein	107-02-8	2-Propenal	8030	5
			8240	5
Acrylonitrile	107-13-1	2-Propenenitrile	8030	5
			8240	5
Aldrin	309-00-2	1,4:5,8-Dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-(1alpha,4alpha,4abeta,5alpha,8alpha,8abeta)-	8080 8270	0.05 10

Allyl chloride	107-05-1	1-Propene, 3-chloro-	8010	5
			8240	100
4-Aminobiphenyl	92-67-1	[1,1'-Biphenyl]-4-amine	8270	10
Aniline	62-53-3	Benzenamine	8270	10
Anthracene	120-12-7	Anthracene	8100	200
			8270	10
Antimony	(Total)	Antimony	6010	300
			7040	2,000
			7041	30
Aramite	140-57-8	Sulfurous acid, 2-chloroethyl 2-[4-(1,1-dimethylethyl)phenoxy]-1-methylethyl ester	8270	10
Arsenic	(Total)	Arsenic	6010	500
			7060	10
			7061	20
Barium	(Total)	Barium	6010	20
			7080	1,000
Benzene	71-43-2	Benzene	8020	2
			8240	5
Benzo[a]anthracene; Benzanthracene	56-55-3	Benz[a]anthracene	8100 8270	200 10
Benzo[b]fluoranthene	205-99-2	Benz[e]acephenanthrylene	8100	200
			8270	10
Benzo[k]fluoranthene	207-08-9	Benzo[k]fluoranthene	8100	200
			8270	10
Benzo[ghi]perylene	191-24-2	Benzo[ghi]perylene	8100	200
			8270	10
Benzo[a]pyrene	50-32-8	Benzo[a]pyrene	8100	200
			8270	10
Benzyl alcohol	100-51-6	Benzenemethanol	8270	20
Beryllium	(Total)	Beryllium	6010	3
			7090	50
			7091	2
alpha-BHC	319-84-6	Cyclohexane, 1,2,3,4,5,6-hexachloro-, (1alpha,2alpha,3beta,4alpha,5beta,6beta)-	8080	0.05
		-	8250	10

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Common Name ²	CAS RN ³	Chemical Abstracts Service	Suggested	PQL(Tg/L) ⁶
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		Index Name ⁴	Methods ⁵	
beta-BHC	319-85-7	Cyclohexane, 1,2,3,4,5,6 hexachloro-, (1alpha,2beta,3alpha,4beta,alpha,6beta)-	8080	0.05
			8250	40
delta-BHC	319-86-8	Cyclohexane, 1,2,3,4,5,6 hexachloro-, (1alpha,2alpha,3alpha,4beta,5alpha,6beta)-	8080	0.1
			8250	30
gamma-BHC; Lindane	58-99-9	Cyclohexane, 1,2,3,4,5,6 hexachloro-, (1alpha,2alpha,3beta,4alpha,5alpha,6beta)-	8080	0.05
-			8250	10
Bis(2-chloroethoxy)methane	111-91-1	Ethane, 1,1' [methylenebis (oxy)]bis[2-chloro-	8270	10
Bis(2-chloroethyl)ether	111-44-4	Ethane, 1,1' oxybis[2-chloro-	8270	10
Bis(2-chloro-1-methylethyl) ether; 2,2'-Dichlorodiisopropyl ether	108-60-1	Propane, 2,2' oxybis[1-chloro-	8010 8270	100 10
Bis(2-ethylhexyl) phthalate	117-81-7	1,2 Benzenedicarboxylic acid, bis(2-ethylhexyl)ester	8060 8270	20 10
Bromodichloromethane	75-27-4	Methane, bromodichloro-	8010 8240	1 5
Bromoform; Tribromomethane	75-25-2	Methane, tribromo-	8010 8240	2 5
4-Bromophenyl-phenyl ether	101-55-3	Benzene, 1-bromo-4-phenoxy-	8270	10
Butyl benzyl phthalate; Benzyl butyl phthalate	85-68-7	1,2 Benzenedicarboxylic acid, butyl phenylmethyl ester	8060 8270	5 10
Cadmium	(Total)	Cadmium	6010	40
-		-	7130	50
			7131	1
Carbon disulfide	75-15-0	Carbon disulfide	8240	5
Carbon tetrachloride	56-23-5	Methane, tetrachloro-	8010 8240	1 5
Chlordane	57-74-9	4,7 Methano-1H-indene, 1,2,4,5,6,7,8,8-octachloro-2,3,3a,4,7,7a hexahydro-	8080 8250	0.1 10

p-Chloroaniline	106-47-8	Benzenamine, 4-chloro-	8270	20
Chlorobenzene	108-90-7	Benzene, chloro-	8010	2
			8020	2
			8240	5
Chlorobenzilate	510-15-6	Benzeneacetic acid, 4-chloro-alpha (4-chlorophenyl)-alpha-hydroxy-, ethyl ester	8270	10
p-Chloro-m-cresol	59-50-7	Phenol, 4-chloro-3-methyl-	8040	5
			8270	20
Chloroethane; — Ethyl chloride	75-00-3	Ethane, chloro-	8010	5
			8240	10
Chloroform	67-66-3	Methane, trichloro-	8010	0.5
			8240	5
2-Chloronaphthalene	91-58-7	Naphthalene, 2-chloro-	8120	10
			8270	10
2-Chlorophenol	95-57-8	Phenol, 2-chloro-	8040	5
			8270	10
4-Chlorophenyl phenyl ether	7005-72-3	Benzene, 1-chloro-4-phenoxy-	8270	10
Chloroprene	126-99-8	1,3-Butadiene, 2-chloro-	8010	50
			8240	5
Chromium	(Total)	Chromium	6010	70
			7190	500
			7191	10
Common Name²	CAS RN³	Chemical Abstracts Service Index Name⁴	Suggested Methods⁵	PQL(Tg/L)⁶

Chrysene	218-01-9	Chrysene	8100	200
			8270	10
Cobalt	(Total)	Cobalt	6010	70
			7200	500
			7201	10
Copper	(Total)	Copper	6010	60

			7210	200
m-Cresol	108-39-4	Phenol, 3-methyl-	8270	10
o-Cresol	95-48-7	Phenol, 2-methyl-	8270	10
p-Cresol	106-44-5	Phenol, 4-methyl-	8270	10
Cyanide	57-12-5	Cyanide	9010	40
2,4-D; 2,4-Dichlorophenoxyacetic acid	94-75-7	Acetic acid, (2,4-dichlorophenoxy)-	8150	10
4,4'-DDD	72-54-8	Benzene, 1,1'-(2,2-dichloroethylidene)bis[4-chloro-	8080 8270	0.1 10
4,4'-DDE	72-55-9	Benzene, 1,1'-(dichloroethenylidene)bis[4-chloro-	8080 8270	0.05 10
4,4'-DDT	50-29-3	Benzene, 1,1'-(2,2,2-trichloroethylidene)bis[4-chloro-	8080 8270	0.1 10
Diallate	2303-16-4	Carbamothioic acid, bis(1-methylethyl), S-(2,3-dichloro-2-propenyl) ester	8270	10
Dibenz[a,h]anthracene	53-70-3	Dibenz[a,h]anthracene	8100	200
			8270	10
Dibenzofuran	132-64-9	Dibenzofuran	8270	10
Dibromochloromethane; Chlorodibromomethane	124-48-1	Methane, dibromochloro-	8010 8240	1 5
1,2-Dibromo-3-chloropropane; DBCP	96-12-8	Propane, 1,2-dibromo-3-chloro-	8010 8240	100 5
			8270	10
1,2-Dibromoethane; Ethylene dibromide	106-93-4	Ethane, 1,2-dibromo-	8010 8240	10 5
Di-n-butyl phthalate	84-74-2	1,2-Benzenedicarboxylic acid, dibutyl ester	8060 8270	5 10
o-Dichlorobenzene	95-50-1	Benzene, 1,2-dichloro-	8010	2
			8020	5
			8120	10
			8270	10
m-Dichlorobenzene	541-73-1	Benzene, 1,3-dichloro-	8010	5
			8020	5
			8120	10

			8270	10
p-Dichlorobenzene	106-46-7	Benzene, 1,4-dichloro-	8010	2
			8020	5
			8120	15
			8270	10
3,3'-Dichlorobenzidine	91-94-1	[1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-	8270	20
trans-1,4-Dichloro-2-butene	110-57-6	2-Butene, 1,4-dichloro-, (E)-	8240	5
Dichlorodifluoromethane	75-71-8	Methane, dichlorodifluoro-	8010 8240	10 5
1,1-Dichloroethane	75-34-3	Ethane, 1,1-dichloro-	8010	1
			8240	5
1,2-Dichloroethane; Ethylene dichloride	107-06-2	Ethane, 1,2-dichloro-	8010 8240	0.5 5
1,1-Dichloroethylene; Vinylidene chloride	75-35-4	Ethene, 1,1-dichloro-	8010 8240	1 5
trans-1,2-Dichloroethylene	156-60-5	Ethene, 1,2-dichloro-, (E)-	8010 8240	1 5
2,4-Dichlorophenol	120-83-2	Phenol, 2,4-dichloro-	8040	5
		-	8270	10
Common Name²	CAS RN³	Chemical Abstracts Service Index Name⁴	Suggested Methods⁵	PQL(Tg/L)⁶

2,6-Dichlorophenol	87-65-0	Phenol, 2,6-dichloro-	8270	10
1,2-Dichloropropane	78-87-5	Propane, 1,2-dichloro-	8010 8240	0.5 5
cis-1,3-Dichloropropene	1006-1-01-5	1-Propene, 1,3-dichloro-, (Z)-	8010 8240	20 5
trans-1,3-Dichloropropene	1006-1-02-6	1-Propene, 1,3-dichloro-, (E)-	8010 8240	5 5
Dieldrin	60-57-1	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha,2beta,2aalpha,3beta,6beta,6aalpha,7beta,7aalpha)-	8080 8270	0.05 10

Diethyl phthalate	84- 66-2	1,2 Benzenedicarboxylic acid, diethyl ester	8060 8270	5 10
O,O-Diethyl O-2-pyrazinyl phosphorothioate; Thionazin	297- 97-2	Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester	8270	10
Dimethoate	60- 51-5	Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester	8270	10
p-(Dimethylamino)azo-benzene	60- 11-7	Benzenamine, N,N-dimethyl 4-(phenylazo)-	8270	10
7,12-Dimethylbenz[a]anthracene	57- 97-6	Benz[a]anthracene, 7,12-dimethyl-	8270	10
3,3'-Dimethylbenzidine	119- 93-7	[1,1'-Biphenyl] 4,4'-diamine, 3,3'-dimethyl-	8270	10
alpha, alpha-Dimethylphenethylamine	122- 09-8	Benzeneethanamine, alpha,alpha-dimethyl-	8270	10
2,4-Dimethylphenol	105- 67-9	Phenol, 2,4-dimethyl-	8040	5
		-	8270	10
Dimethyl phthalate	131- 11-3	1,2 Benzenedicarboxylic acid, dimethyl ester	8060 8270	5 10
m-Dinitrobenzene	99- 65-0	Benzene, 1,3-dinitro-	8270	10
4,6-Dinitro-o-cresol	534- 52-1	Phenol, 2-methyl 4,6-dinitro-	8040	150
	-	-	8270	50
2,4-Dinitrophenol	51- 28-5	Phenol, 2,4-dinitro-	8040	150
	-	-	8270	50
2,4-Dinitrotoluene	121- 14-2	Benzene, 1-methyl 2,4-dinitro-	8090	0.2
	-	-	8270	10
2,6-Dinitrotoluene	606- 20-2	Benzene, 2-methyl 1,3-dinitro-	8090	0.1
-	-	-	8270	10
Dinoseb; DNBP; 2-sec-Butyl 4,6-dinitrophenol	88- 85-7	Phenol, 2-(1-methylpropyl) 4,6-dinitro-	8150 8270	1 10
Di-n-octyl phthalate	117- 84-0	1,2 Benzenedicarboxylic acid, dioctyl ester	8060 8270	30 10

1,4 Dioxane	123-91-1	1,4 Dioxane	8015	150
Diphenylamine	122-39-4	Benzenamine, N-phenyl-	8270	10
Disulfoton	298-04-4	Phosphorodithioic acid, O,O-diethyl S-[2-(ethylthio)ethyl]ester	8140 8270	2 10
Endosulfan I	959-98-8	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide, (3alpha,5abeta,6alpha,9alpha,9abeta)-	8080 8250	0.1 10
Endosulfan II	3321-3-65-9	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3-oxide, (3alpha,5aalpha,6beta,9beta,9aalpha)-	8080	0.05
Endosulfan-sulfate	1031-07-8	6,9-Methano-2,4,3-benzodioxathiepin, 6,7,8,9,10,10-hexachloro-1,5,5a,6,9,9a-hexahydro-, 3,3-dioxide	8080 8270	0.5 10
Endrin	72-20-8	2,7:3,6-Dimethanonaphth[2,3-b]oxirene, 3,4,5,6,9,9-hexachloro-1a,2,2a,3,6,6a,7,7a-octahydro-, (1aalpha, 2beta,2abeta,3alpha,6alpha,6abeta,7beta,7aalpha)-	8080 8250	0.1 10
Common Name²	CAS RN³	Chemical Abstracts Service Index Name⁴	Suggested Method⁵	PQL(Tg/L)⁶

Endrin-aldehyde	7421-93-4	1,2,4-Methenocyclopenta[cd]pentalene-5-carboxaldehyde, 2,2a,3,3,4,7-hexachlorodecahydro-, (1alpha,2beta,2abeta,4beta,4abeta,5beta,6beta,,6bbeta,7R*)-	8080 8270	0.2 10
Ethylbenzene	100-41-4	Benzene, ethyl-	8020	2
-	-	-	8240	5
Ethyl methacrylate	97-63-2	2-Propenoic acid, 2-methyl-, ethyl ester	8015 8240	10 5
-	-	-	8270	10
Ethyl methanesulfonate	62-50-0	Methanesulfonic acid, ethyl ester	8270	10
Famphur	52-85-7	Phosphorothioic acid, O-[4-[(dimethylamino)sulfonyl]phenyl]-O,O-dimethyl ester	8270	10
Fluoranthene	206-44-0	Fluoranthene	8100	200

	h)			
			7420	1,000
-	-	-	7421	10
Mercury	(Total)	Mercury	7470	2
Methacrylonitrile	126-98-7	2-Propenenitrile, 2-methyl-	8015	5
Methapyrilene	91-80-5	1,2-Ethanediamine, N,N dimethyl N'-2-pyridinyl N' (2-thienylmethyl)-	8270	10
Common Name²	CAS RN³	Chemical Abstracts Service Index Name⁴	Suggested Method⁵	PQL(Tg/L)⁶

Methoxychlor	72-43-5	Benzene, 1,1'-(2,2,2-trichloroethylidene) bis[4-methoxy-	8080 8270	2 10
Methyl bromide; Bromomethane	74-83-9	Methane, bromo-	8010 8240	20 10
Methyl chloride; Chloromethane	74-87-3	Methane, chloro-	8010 8240	1 10
3-Methylcholanthrene	56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-	8270	10
Methylene bromide; Dibromomethane	74-95-3	Methane, dibromo-	8010 8240	15 5
Methylene chloride; Dichloromethane	75-09-2	Methane, dichloro-	8010 8240	5 5
Methyl ethyl ketone; MEK	78-93-3	2-Butanone	8015 8240	10 100
Methyl iodide; Iodomethane	74-88-4	Methane, iodo-	8010 8240	40 5
Methyl methacrylate	80-62-6	2-Propenoic acid, 2-methyl, methyl ester	8015 8240	2 5
Methyl Methanesulfonate	66-27-3	Methanesulfonic acid, methyl ester	8270	10
2-Methylnaphthalene	91-57-6	Naphthalene, 2-methyl-	8270	10
Methyl parathion; Parathion methyl	298-00-0	Phosphorothioic acid, O,O-dimethyl O-(4-nitrophenyl) ester	8140 8270	0.5 10
4-Methyl-2-pentanone; Methyl isobutyl ketone	108-10-1	2-Pentanone, 4-methyl-	8015 8240	5 50
Naphthalene	91-20-3	Naphthalene	8100	200

-	-	-	8270	10
1,4-Naphthoquinone	130-15-4	1,4-Naphthalenedione	8270	10
1-Naphthylamine	134-32-7	1-Naphthalenamine	8270	10
2-Naphthylamine	91-59-8	2-Naphthalenamine	8270	10
Nickel	(Total)	Nickel	6010	50
			7520	400
o-Nitroaniline	88-74-4	Benzenamine, 2-nitro-	8270	50
m-Nitroaniline	99-09-2	Benzenamine, 3-nitro-	8270	50
p-Nitroaniline	100-01-6	Benzenamine, 4-nitro-	8270	50
Nitrobenzene	98-95-3	Benzene, nitro-	8090	40
		-	8270	10
o-Nitrophenol	88-75-5	Phenol, 2-nitro-	8040	5
			8270	10
p-Nitrophenol	100-02-7	Phenol, 4-nitro-	8040	10
			8270	50
4-Nitroquinoline 1-oxide	56-57-5	Quinoline, 4-nitro-, 1-oxide	8270	10
N-Nitrosodi-n-butylamine	924-16-3	1-Butanamine, —N-butyl N-nitroso-	8270	10
N-Nitrosodiethylamine	55-18-5	Ethanamine, —N-ethyl N-nitroso-	8270	10
N-Nitrosodimethylamine	62-75-9	Methanamine, —N-methyl N-nitroso-	8270	10
N-Nitrosodiphenylamine	86-30-6	Benzenamine, —N-nitroso-N-phenyl-	8270	10
N-Nitrosodipropylamine; Di-n-propylnitrosamine	621-64-7	1-Propanamine, —N-nitroso-N-propyl-	8270	10
N-Nitrosomethylethylamine	10595-95-6	Ethanamine, —N-methyl N-nitroso-	8270	10
N-Nitrosomorpholine	59-89-2	Morpholine, 4-nitroso-	8270	10
N-Nitrosopiperidine	100-75-4	Piperidine, 1-nitroso-	8270	10
N-Nitrosopyrrolidine	930-55-2	Pyrrolidine, 1-nitroso-	8270	10
5-Nitro-o-toluidine	99-55-8	Benzenamine, —2-methyl-5-nitro-	8270	10
Parathion	56-38-2	Phosphorothioic acid, —O,O-diethyl-O-(4-nitrophenyl) ester	8270	10
Polychlorinated biphenyls; PCBs	See Note 7	1,1'-Biphenyl, —chloro derivatives	8080 8250	50 100
Polychlorinated dibenzo-p-dioxins; PCDDs	See Note 8	Dibenzo[b,e][1,4]dioxin, chloro-derivatives	8280	0.01

Polychlorinated dibenzofurans; PCDFs	See Note 9	Dibenzofuran, chloro derivatives	8280	0.01
Common Name ²	CAS RN ³	Chemical Abstracts Service Index Name ⁴	Suggested Methods ⁵	PQL(Tg/L) ⁶

Pentachlorobenzene	608-93-5	Benzene, pentachloro-	8270	10
Pentachloroethane	76-01-7	Ethane, pentachloro-	8240	5
		-	8270	10
Pentachloronitrobenzene	82-68-8	Benzene, pentachloronitro-	8270	10
Pentachlorophenol	87-86-5	Phenol, pentachloro-	8040	5
		-	8270	50
Phenacetin	62-44-2	Acetamide, N-(4-ethoxyphenyl)	8270	10
Phenanthrene	85-01-8	Phenanthrene	8100	200
		-	8270	10
Phenol	108-95-2	Phenol	8040	1
		-	8270	10
p-Phenylenediamine	106-50-3	1,4-Benzenediamine	8270	10
Phorate	298-02-2	Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester	8140 8270	2 10
2-Picoline	109-06-8	Pyridine, 2-methyl-	8240	5
-		-	8270	10
Pronamide	23950-58-5	Benzamide, 3,5-dichloro-N-(1,1-dimethyl-2-propynyl)-	8270	10
Propionitrile; Ethyl cyanide	107-12-0	Propanenitrile	8015 8240	60 5
Pyrene	129-00-0	Pyrene	8100	200
-	-	-	8270	10
Pyridine	110-86-1	Pyridine	8240	5
Safrole	94-59-7	1,3-Benzodioxole, 5-(2-propenyl)-	8270	10
Selenium	(Total)	Selenium	6010	750
		-	7740	20
		-	7741	20

Silver	(Total)	Silver	6010	70
		-	7760	100
Silvex; 2,4,5 TP	93-72-1	Propanoic acid, 2-(2,4,5-trichlorophenoxy)-	8150	2
Styrene	100-42-5	Benzene, ethenyl-	8020	1
		-	8240	5
Sulfide	18496-25-8	Sulfide	9030	10,000
2,4,5 T; 2,4,5-Trichlorophenoxyacetic acid	93-76-5	Acetic acid, (2,4,5-trichlorophenoxy)-	8150	2
2,3,7,8 TCDD; 2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	Dibenzo[b,e][1,4]dioxin, 2,3,7,8-tetrachloro-	8280	0.005
1,2,4,5-Tetrachlorobenzene	95-94-3	Benzene, 1,2,4,5-tetrachloro-	8270	10
1,1,1,2-Tetrachloroethane	630-20-6	Ethane, 1,1,1,2-tetrachloro-	8010 8240	5 5
1,1,2,2-Tetrachloroethane	79-34-5	Ethane, 1,1,2,2-tetrachloro-	8010 8240	0.5 5
Tetrachloroethylene; Perchloroethylene; Tetrachloroethene	127-18-4	Ethene, tetrachloro-	8010 8240	0.5 5
2,3,4,6-Tetrachlorophenol	58-90-2	Phenol, 2,3,4,6-tetrachloro-	8270	10
Tetraethyl dithiopyrophosphate; Sulfotepp	3689-24-5	Thiodiphosphoric acid ((HO) ₂ P(S) ₂ O), tetraethyl ester	8270	10
Thallium	(Total)	Thallium	-	-
Tin	(Total)	Tin	7870	8,000
Toluene	108-88-3	Benzene, methyl-	8020	2
		-	8240	5
o-Toluidine	95-53-4	Benzenamine, 2-methyl-	8270	10
Toxaphene	8001-35-2	Toxaphene	8080	2
-	-	-	8250	10
1,2,4-Trichlorobenzene	120-82-1	Benzene, 1,2,4-trichloro-	8270	10
1,1,1-Trichloroethane; Methylchloroform	71-55-6	Ethane, 1,1,1-trichloro-	8240	5
1,1,2-Trichloroethane	79-00-5	Ethane, 1,1,2-trichloro-	8010	0.2
		-	8240	5

Common Name ²	CAS RN ³	Chemical Abstracts Service Index Name ⁴	Suggested Methods ⁵	PQL(Tg/L) ⁶
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Trichloroethylene; Trichloroethene	79-01-6	Ethene, trichloro-	8010	1
Trichlorofluoromethane	75-69-4	Methane, trichlorofluoro-	8010 8240	10 5
2,4,5-Trichlorophenol	95-95-4	Phenol, 2,4,5-trichloro-	8270	10
2,4,6-Trichlorophenol	88-06-2	Phenol, 2,4,6-trichloro-	8040 8270	5 10
1,2,3-Trichloropropane	96-18-4	Propane, 1,2,3-trichloro-	8010 8240	10 5
O,O,O-Triethyl phosphorothioate	126-68-1	Phosphorothioic acid, O,O,O-triethyl ester	8270	10
sym-Trinitrobenzene	99-35-4	Benzene, 1,3,5-trinitro-	8270	10
Vanadium	(Total)	Vanadium	6010	80
		-	7910	2,000
		-	7911	40
Vinyl acetate	108-05-4	Acetic acid, ethenyl ester	8240	5
Vinyl chloride	75-01-4	Ethene, chloro-	8010	2
		-	8240	10
Xylene (total)	1330-20-7	Benzene, dimethyl-	8020	5
		-	8240	5
Zinc	(Total)	Zinc	6010	20
		-	7950	50

FOOTNOTE: ¹The regulatory requirements pertain only to the list of substances; the right hand columns (Methods and PQL) are given for informational purposes only. See also footnotes 5 and 6.

FOOTNOTE: ²Common names are those widely used in government regulations, scientific publications, and commerce; synonyms exist for many chemicals.

FOOTNOTE: ³Chemical Abstracts Service registry number. Where "Total" is entered, all species in the ground water that contain this element are included.

FOOTNOTE: ⁴CAS index names are those used in the 9th Cumulative Index.

FOOTNOTE: ⁵Suggested methods refer to analytical procedure numbers used in the EPA publication, SW-846, "Test Methods for Evaluating Solid Waste", Third Edition. Analytical details can be found in SW-846 and in documentation on file at the Agency. The packed column gas chromatography methods 8010, 8020, 8030, 8040, 8060, 8080, 8090, 8110, 8120, 8140, 8150, 8240, and 8250 were promulgated methods through Update IIB of SW-846 and, as of Update III, EPA has replaced these methods with "capillary column GC methods", as the suggested methods.

FOOTNOTE: ⁶Suggested Methods refer to analytical procedure numbers used in EPA Report SW-846 "Test Methods for Evaluating Solid Waste", third edition, November 1986. Analytical details can be found in SW-846 and in documentation on file at the agency. CAUTION: The methods listed are representative SW-846 procedures and may not always be the most suitable method(s) for monitoring an analyte under the regulations.

FOOTNOTE: ⁶Practical Quantitation Limits (PQLs) are the lowest concentrations of analytes in ground waters that can be reliably determined within specified limits of precision and accuracy by the indicated methods under routine laboratory operating conditions. The PQLs listed are generally stated to one significant figure. CAUTION: The PQL values in many cases are based only on a general estimate for the method and not on a determination for individual compounds; PQLs are not a part of the regulation.

FOOTNOTE: ⁷Polychlorinated biphenyls (CAS RN 1336 36 3); this category contains congener chemicals, including constituents of Aroclor 1016 (CAS RN 12674 11 2), Aroclor 1221 (CAS RN 11104 28 2), Aroclor 1232 (CAS RN 11141 16 5), Aroclor 1242 (CAS RN 53469 21 9), Aroclor 1248 (CAS RN 12672 29 6), Aroclor 1254 (CAS RN 11097 69 1), and Aroclor 1260 (CAS RN 11096 82 5). The PQL shown is an average value for PCB congeners.

FOOTNOTE: ⁸This category contains congener chemicals, including tetrachlorodibenzo p dioxins (see also 2,3,7,8 TCDD), pentachlorodibenzo p dioxins, and hexachlorodibenzo p dioxins. The PQL shown is an average value for PCDD congeners.

FOOTNOTE: ⁹This category contains congener chemicals, including tetrachlorodibenzofurans, pentachlorodibenzofurans, and hexachlorodibenzofurans. The PQL shown is an average value for PCDF congeners.

Appendix IX to Part 264 – Groundwater Monitoring List

Section 265.190 Applicability

(a) Tank systems that are used to store or treat hazardous waste containing no free liquids and that are situated inside a building with an impermeable floor are exempted from the requirements of §265.193 of this subpart. To demonstrate the absence or presence of free liquids in the stored/treated waste, the following test must be used: Method ~~9095~~ 9095B (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11 of these regulations.

Section 265.314 Special requirements for liquid bulk and containerized liquids.

(d) To demonstrate the absence or presence of free liquids in either a containerized or a bulk waste, the following test must be used: Method ~~9095~~ 9095B (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11 of these regulations.

Section 265.1034 Test methods and procedures.

(c)(1)...

(ii) Method 18 or Method 25A in 40 CFR Part 60, Appendix A for organic content. If Method 25A is used, the organic HAP used as the calibration gas must be the single organic HAP representing the largest percent by volume of the emissions. The use of Method 25A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

Section 265.1034 Test methods and procedures.

(c)(1)...

(iv) Total organic mass flow rates shall be determined by the following equation:

(A) For sources utilizing Method 18.

$$E_h = Q_{2,2} \left\{ \sum_{i=1}^n C_i MW_i \right\} [0.0416] [10^{-6}]$$

where:

E_h = Total organic mass flow rate, kg/h;

$Q_{2,2}$ = Volumetric flow rate of gases entering or exiting control device, as determined by Method 2, dscm/h;

n = Number of organic compounds in the vent gas;

C_i = Organic concentration in ppm, dry basis, of compound i in the vent gas, as determined by Method 18;

MW_i = Molecular weight of organic compound i in the vent gas, kg/kg-mol;

0.0416 = Conversion factor for molar volume, kg-mol/m³ (@ 293 K and 760 mm Hg);

10^{-6} = Conversion from ppm, ppm⁻¹.

(B) For sources utilizing Method 25A.

$$E_h = (Q)(C)(MW)(0.0416)(10^{-6})$$

Where:

E_h = Total organic mass flow rate, kg/h;

Q = Volumetric flow rate of gases entering and exiting control device, as determined by Method 2, dscm/h

C = Organic concentration in ppm, dry basis; as determined by Method 25A

MW = Molecular weight of propane, 44;

0.0416 = Conversion factor for molar volume, kg-mol/m³ (@ 293 K and 760 mm Hg);

10^{-6} = conversion from ppm.

Section 265.1034 Test methods and procedures.

(d)(1)...

(iii) Each sample shall be analyzed and the total organic concentration of the sample shall be computed using Method ~~9060~~ 9060A or ~~8260 of SW-846~~ (incorporated by reference under §260.11 of these regulations) of “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846, or analyzed for its individual organic constituents.

Section 265.1034 Test methods and procedures.

(f) When an owner or operator and the Secretary do not agree on whether a distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation manages a hazardous waste with organic concentrations of at least 10 ppmw based on knowledge of the waste, ~~the procedures in Method 8260 of SW-846 (incorporated by reference under §260.11)~~ the dispute may be resolved by using direct measurement as specified at paragraph (d)(1) of this section.

Section 265.1063 Test methods and procedures.

(d)...

(2) Method ~~9060~~ 9060A ~~or 8260 of SW-846 (incorporated by reference under §260.11 of these regulations)~~ of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, or analyzed for its individual organic constituents; or

Section 265.1081 Definitions.

"Waste stabilization process" means any physical or chemical process used to either reduce the mobility of hazardous constituents in a hazardous waste or eliminate free liquids as determined by Test Method ~~9095~~ 9095B (Paint Filter Liquids Test) in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," ~~EPA Publication No. SW-846, Third Edition, September 1986, as amended by Update I, November 15, 1992 (incorporated by reference refer to §260.11 of these regulations)~~ EPA Publication SW-846, as incorporated by reference in § 260.11 of these regulations. A waste stabilization process includes mixing the hazardous waste with binders or other materials, and curing the resulting hazardous waste and binder mixture. Other synonymous terms used to refer to this process are "waste fixation" or "waste solidification." This does not include the adding of absorbent materials to the surface of a waste, without mixing, agitation, or subsequent curing, to absorb free liquid.

Section 265.1084 Waste determination procedures.

(a)(3)(ii)...

(C) All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the hazardous waste stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process, and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained on-site in the facility operating records. An example of ~~an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, (incorporated by reference refer to §260.11(a)), or acceptable sample collection and handling procedures for a~~

total volatile organic constituent concentration may be found in Method 25D in 40 CFR Part 60, Appendix A.

Section 265.1084 Waste determination procedures.

(a)(3)...

(iii) Analysis. ~~Each collected sample shall be prepared and analyzed in accordance with one or more of the methods listed in paragraphs (a)(3)(iii)(A) through (a)(3)(iii)(I) of this section, including appropriate quality assurance and quality control (QA/QC) checks and use of target compounds for calibration. If Method 25D in 40 CFR Part 60, Appendix A is not used, then one or more methods should be chosen that are appropriate to ensure that the waste determination accounts for and reflects all organic compounds in the waste with Henry's law constant values at least 0.1 mole fraction in the gas phase/mole fraction in the liquid phase (0.1 Y/X) [which can also be expressed as 1.8×10^{-6} atmospheres/gram mole/m³] at 25°C. Each of the analytical methods listed in paragraphs (a)(3)(iii)(B) through (a)(3)(iii)(G) of this section has an associated list of approved chemical compounds, for which DNREC considers the method appropriate for measurement. If an owner or operator uses Method 624, 625, 1624, or 1625 in 40 CFR Part 136, Appendix A to analyze one or more compounds that are not on that method's published list, the Alternative Test Procedure contained in 40 CFR 136.4 and 136.5 must be followed. If an owner or operator uses EPA Method 8260 or 8270 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, (incorporated by reference—refer to §260.11(a) of these regulations) to analyze one or more compounds that are not on that method's published list, the procedures in paragraph (a)(3)(iii)(H) of this section must be followed. At the owner or operator's discretion, the concentration of each individual chemical constituent measured in the waste by a method other than Method 25D may be corrected to the concentration had it been measured using Method 25D by multiplying the measured concentration by the constituent-specific adjustment factor (f_{m25D}) as specified in paragraph (a)(4)(iii) of this section. Constituent-specific adjustment factors (f_{m25D}) can be obtained by contacting the Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711.~~ Each collected sample shall be prepared and analyzed in accordance with Method 25D in 40 CFR Part 60, Appendix A for the total concentration of volatile organic constituents, or using one or more methods when the individual organic compound concentrations are identified and summed and the summed waste concentration accounts for and reflects all organic compounds in the waste with Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-franction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m³] at 25 degrees Celsius. At the owner or operator's discretion, the owner or operator may adjust test data obtained by any appropriate method to discount any contribution to the total volatile organic concentration that is a result of including a compound with a Henry's law constant value of less than 0.1 Y/X at 25 degrees Celsius. To adjust these data, the measured concentration of each individual chemical constituent contained in the waste is multiplied by the appropriate constituent-specific adjustment factor (f_{m25D}). If the owner or operator elects to adjust test data, the adjustment must be made to all individual chemical constituents with a Henry's law constant value greater than or equal to 0.1 Y/X at 25 degrees Celsius contained in the waste. Constituent specific adjustment factors (f_{m25D}) can be obtained by contacting the Waste and

Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711. Other test methods may be used if they meet the requirements in paragraph (a)(3)(iii)(A) or (B) of this section and provided the requirement to reflect all organic compounds in the waste with Henry's law constant values greater than or equal to 0.1 Y/X [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m³] at 25 degrees Celsius, is met.

~~(A) Method 25D in 40 CFR Part 60, Appendix A.~~

~~(B) Method 624 in 40 CFR Part 136, Appendix A.~~

~~(C) Method 625 in 40 CFR Part 136, Appendix A. Perform corrections to the compounds for which the analysis is being conducted based on the "accuracy as recovery" using the factors in Table 7 of the method.~~

~~(D) Method 1624 in 40 CFR Part 136, Appendix A.~~

~~(E) Method 1625 in 40 CFR Part 136, Appendix A.~~

~~(F) Method 8260 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 (incorporated by reference refer to §260.11(a) of these regulations).~~

~~Maintain a formal quality assurance program consistent with the requirements of Method 8260. The quality assurance program shall include the following elements:~~

~~(1) Documentation of site specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, preparation, introduction, and analysis steps.~~

~~(2) Measurement of the overall accuracy and precision of the specific procedures.~~

~~(G) Method 8270 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 (incorporated by reference refer to §260.11(a) of these regulations). Maintain a formal quality assurance program consistent with the requirements of Method 8270. The quality assurance program shall include the following elements.~~

~~(1) Documentation of site specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, preparation, introduction, and analysis steps.~~

~~(2) Measurement of the overall accuracy and precision of the specific procedures.~~

~~(H)-(A) Any other EPA standard method that has been validated in accordance with "Alternative Validation Procedure for EPA Waste and Wastewater Methods", 40 CFR Part 63, Appendix D. As an alternative, other EPA standard methods may be validated by the procedure specified in paragraph (a)(3)(iii)(I) of this section.~~

~~(I) (B) Any other analysis method that has been validated in accordance with the procedures specified in Section 5.1 or Section 5.3, and the corresponding calculations in Section 6.1 or Section 6.3, of Method 301 in 40 CFR Part 63, Appendix A. The data are acceptable if they meet the criteria specified in Section 6.1.5 or Section 6.3.3 of Method 301. If correction is required under section 6.3.3 of Method 301, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 are not required.~~

Section 265.1084 Waste determination procedures.

(b)(3)(ii)...

(C) All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the hazardous waste stream are collected such that a minimum loss of organics occurs throughout the sample collection and handling process, and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained on-site in the facility operating records. An example of ~~an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846 (incorporated by reference—refer to §260.11(a)), or acceptable sample collection and handling procedures for a total volatile organic constituent concentration may be found in~~ Method 25D in 40 CFR Part 60, Appendix A.

Section 265.1084 Waste determination procedures.

(b)(3)...

(iii) Analysis. ~~Each collected sample shall be prepared and analyzed in accordance with one or more of the methods listed in paragraphs (b)(3)(iii)(A) through (b)(3)(iii)(I) of this section, including appropriate quality assurance and quality control (QA/QC) checks and use of target compounds for calibration. When the owner or operator is making a waste determination for a treated hazardous waste that is to be compared to an average VO concentration at the point of waste origination or the point of waste entry to the treatment system to determine if the conditions of §264.1082(c)(2)(i) through (c)(2)(vi) or §265.1083(c)(2)(i) through (c)(2)(vi) are met, then the waste samples shall be prepared and analyzed using the same method or methods as were used in making the initial waste determinations at the point of waste origination or at the point of entry to the treatment system. If Method 25D in 40 CFR, Part 60, Appendix A is not used, then one or more methods should be chosen that are appropriate to ensure that the waste determination accounts for and reflects all organic compounds in the waste with Henry's Law constant values at least 0.1 mole fraction in the gas phase/mole-fraction in the liquid phase (0.1 Y/X) [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m³] at 25°C. Each of the analytical methods listed in paragraphs (b)(3)(iii)(B) through (b)(3)(iii)(G) of this section has an associated list of approved chemical compounds, for which EPA considers the method appropriate for measurement. If an owner or operator uses EPA Method 624, 625, 1624, or 1625 in 40 CFR, Part 136, Appendix A to analyze one or more compounds that are not on that method's published list, the Alternative Test Procedure contained in 40 CFR, 136.4 and 136.5 must be followed. If an owner or operator uses EPA Method 8260 or 8270 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", EPA Publication SW-846, (incorporated by reference—refer to §260.11(a) of these regulations) to analyze one or more compounds that are not on that method's published list, the procedures in paragraph (b)(3)(iii)(H) of this section must be followed. At the owner or operator's discretion, the owner or operator may adjust test data measured by a method other than Method 25D to the corresponding average VO concentration value which would have been obtained had the waste samples been analyzed~~

~~using Method 25D in 40 CFR, Part 60, Appendix A. To adjust these data, the measured concentration of each individual chemical constituent contained in the waste is multiplied by the appropriate constituent specific adjustment factor (f_{m25D}). If the owner or operator elects to adjust test data, the adjustment must be made to all individual chemical constituents with a Henry's Law constant equal to or greater than 0.1 Y/X at 25°C contained in the waste. Constituent-specific adjustment factors (f_{m25D}) can be obtained by contacting the Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711. Each collected sample shall be prepared and analyzed in accordance with Method 25D in 40 CFR Part 60, Appendix A for the total concentration of volatile organic constituents, or using one or more methods when the individual organic compound concentrations are identified and summed and the summed waste concentration accounts for and reflects all organic compounds in the waste with Henry's law constant values at least 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m³] at 25 degrees Celsius. At the owner or operator's discretion, the owner or operator may adjust test data obtained by any appropriate method to discount any contribution to the total volatile organic concentration that is a result of including a compound with a Henry's law constant value of less than 0.1 Y/X at 25 degrees Celsius. To adjust these data, the measured concentration of each individual chemical constituent contained in the waste is multiplied by the appropriate constituent-specific adjustment factor (f_{m25D}). If the owner or operator elects to adjust test data, the adjustment must be made to all individual chemical constituents with a Henry's law constant value greater than or equal to 0.1 Y/X at 25 degrees Celsius contained in the waste. Constituent specific adjustment factors (f_{m25D}) can be obtained by contacting the Waste and Chemical Processes Group, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27711. Other test methods may be used if they meet the requirements in paragraph (a)(3)(iii)(A) or (B) of this section and provided the requirement to reflect all organic compounds in the waste with Henry's law constant values greater than or equal to 0.1 Y/X [which can also be expressed as 1.8×10^{-6} atmospheres/gram-mole/m³] at 25 degrees Celsius, is met.~~

- ~~(A) Method 25D in 40 CFR Part 60, Appendix A.~~
- ~~(B) Method 624 in 40 CFR Part 136, Appendix A.~~
- ~~(C) Method 625 in 40 CFR Part 136, Appendix A. Perform corrections to the compounds for which the analysis is being conducted based on the "accuracy as recovery" using the factors in Table 7 of the method.~~
- ~~(D) Method 1624 in 40 CFR Part 136, Appendix A.~~
- ~~(E) Method 1625 in 40 CFR Part 136, Appendix A.~~
- ~~(F) Method 8260 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 (incorporated by reference refer to §260.11(a) of these regulations). Maintain a formal quality assurance program consistent with the requirements of Method 8260. The quality assurance program shall include the following elements:~~
 - ~~(1) Documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, preparation, introduction, and analysis steps.~~
 - ~~(2) Measurement of the overall accuracy and precision of the specific procedures.~~

~~(G) Method 8270 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846 (incorporated by reference refer to §260.11(a) of these regulations). Maintain a formal quality assurance program consistent with the requirements of Method 8270. The quality assurance program shall include the following elements:~~

- ~~(1) Documentation of site specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, preparation, introduction, and analysis steps.~~
- ~~(2) Measurement of the overall accuracy and precision of the specific procedures.~~

~~(H)-(A) Any other EPA standard method that has been validated in accordance with "Alternative Validation Procedure for EPA Waste and Wastewater Methods", 40 CFR Part 63, Appendix D. As an alternative, other EPA standard methods may be validated by the procedure specified in paragraph (b)(3)(iii)(I) of this section.~~

~~(I)-(B) Any other analysis method that has been validated in accordance with the procedures specified in Section 5.1 or Section 5.3, and the corresponding calculations in Section 6.1 or Section 6.3, of Method 301 in 40 CFR Part 63, Appendix A. The data are acceptable if they meet the criteria specified in Section 6.1.5 or Section 6.3.3 of Method 301. If correction is required under Section 6.3.3 of Method 301, the data are acceptable if the correction factor is within the range 0.7 to 1.30. Other sections of Method 301 are not required.~~

Section 265.1084 Waste determination procedures.

(c)(3)...

(i) Sampling. A sufficient number of samples shall be collected to be representative of the waste contained in the tank. All samples shall be collected and handled in accordance with written procedures prepared by the owner or operator and documented in a site sampling plan. This plan shall describe the procedure by which representative samples of the hazardous waste are collected such that a minimum loss of organics occurs throughout the sample collection and handling process and by which sample integrity is maintained. A copy of the written sampling plan shall be maintained on-site in the facility operating records. An example of ~~an acceptable sampling plan includes a plan incorporating sample collection and handling procedures in accordance with the requirements specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication No. SW-846, (incorporated by reference refer to §260.11(a)), or acceptable sample collection and handling procedures for a total volatile organic constituent concentration may be found in~~ Method 25D in 40 CFR Part 60, Appendix A.

Section 266.100 Applicability.

(g)...

(2) Sample and analyze the hazardous waste as necessary to document that the waste is ~~burned for recovery of economically significant amounts of precious metal using procedures specified by Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, incorporated by reference in §260.11 of these regulations or alternative methods that~~

~~meet or exceed the SW-846 method performance capabilities. If SW-846 does not prescribe a method for a particular determination, the owner or operator shall use the best available method contains economically significant amounts of the metals and that the treatment recovers economically significant amounts of precious metal; and~~

Section 266.102 Permit standards for burners.

(b)...

(1) The owner or operator must provide an analysis of the hazardous waste that quantifies the concentration of any constituent identified in Appendix VIII of Part 261 of these regulations that may reasonably be expected to be in the waste. Such constituents must be identified and quantified if present, at levels detectable ~~by analytical procedures prescribed by Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (incorporated by reference, see §260.11 of these regulations)~~ by using appropriate analytical procedures. ~~Alternative methods that meet or exceed the method performance capabilities of SW-846 methods may be used. If SW-846 does not prescribe a method for a particular determination, the owner or operator shall use the best available method.~~ The Appendix VIII, Part 261 constituents excluded from this analysis must be identified and the basis for their exclusion explained. This analysis will be used to provide all information required by this subpart and §122.22 and §122.66 of these regulations and to enable the permit writer to prescribe such permit conditions as necessary to protect human health and the environment. Such analysis must be included as a portion of the Part B permit application, or, for facilities operating under the interim status standards of this subpart, as a portion of the trial burn plan that may be submitted before the Part B application under provisions of §122.66(g) of these regulations as well as any other analysis required by the permit authority in preparing the permit. Owners and operators of boilers and industrial furnaces not operating under the interim status standards must provide the information required by §§ 122.22 or 122.66(c) of these regulations in the Part B application to the greatest extent possible.

Section 266.106 Standards to control metals emissions.

(a) General. The owner or operator must comply with the metals standards provided by paragraphs (b), (c), (d), (e), or (f) of this section for each metal listed in paragraph (b) of this section that is present in the hazardous waste at detectable levels ~~using analytical procedures specified in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846), incorporated by reference in §260.11 of these regulations~~ by using appropriate analytical procedures.

Section 266.112 Regulation of residues.

(b)...

(1) Comparison of waste-derived residue with normal residue. The waste-derived residue must not contain Appendix VIII, Part 261 constituents (toxic constituents) that could reasonably be attributable to the hazardous waste at concentrations

significantly higher than in residue generated without burning or processing of hazardous waste, using the following procedure. Toxic compounds that could reasonably be attributable to burning or processing the hazardous waste (constituents of concern) include toxic constituents in the hazardous waste, and the organic compounds listed in Appendix VIII of this part that may be generated as products of incomplete combustion. ~~Sampling and analyses shall be in conformance with procedures prescribed in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, incorporated by reference in §260.11(a) of these regulations.~~ For polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans, analyses must be performed to determine specific congeners and homologues, and the results converted to 2,3,7,8-TCDD equivalent values using the procedure specified in Section 4.0 of Appendix IX of this part.

Section 266.112 Regulation of residues.

(b)(2)...

(i) Nonmetal constituents. The concentration of each nonmetal toxic constituent of concern (specified in paragraph (b)(1) of this section) in the waste-derived residue must not exceed the health-based level specified in Appendix VII of this part, or the level of detection ~~(using analytical procedures prescribed in SW-846)~~, whichever is higher. If a health-based limit for a constituent of concern is not listed in Appendix VII of this part, then a limit of 0.002 micrograms per kilogram or the level of detection ~~(using analytical procedures contained in SW-846, or other appropriate methods)~~ (which must be determined by using appropriate analytical procedures), whichever is higher, must be used. The levels specified in Appendix VII of this part (and the default level of 0.002 micrograms per kilogram or the level of detection for constituents as identified in Note 1 of Appendix VII of ~~these regulations~~ this part) are administratively stayed under the condition, for those constituents specified in paragraph (b)(1) of this section, that the owner or operator complies with alternative levels defined as the land disposal restriction limits specified in §268.43 of these regulations for F039 nonwastewaters. In complying with those alternative levels, if an owner or operator is unable to detect a constituent despite documenting use of best good-faith efforts as defined by applicable EPA guidance or standards, the owner or operator is deemed to be in compliance for that constituent. Until new guidance or standards are developed, the owner or operator may demonstrate such good faith efforts by achieving a detection limit for the constituent that does not exceed an order of magnitude above the level provided by §268.43 of these regulations for F039 nonwastewaters. In complying with the §268.43 of these regulations, F039 nonwastewater levels for polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans, analyses must be performed for total hexachlorodibenzo-p-dioxins, total hexachlorodibenzofurans, total pentachlorodibenzo-p-dioxins, total pentachlorodibenzofurans, total tetrachlorodibenzo-p-dioxins, and total tetrachlorodibenzofurans. The stay will remain in effect until further administrative action is taken and notice is published in the FEDERAL REGISTER and the Code of Federal Regulations; and

Appendix IX to Part 266 - Methods Manual for Compliance With the BIF Regulations

Section 1.0 INTRODUCTION

This document presents required methods for demonstrating compliance with Delaware Delaware's Regulations Governing Hazardous Waste (DRGHW) for boilers and industrial furnaces (BIFs) burning hazardous waste (see Part 266, Subpart H). Included in this document are:

1. Performance Specifications for Continuous Emission Monitoring (CEM) of Carbon Monoxide, Oxygen, and Hydrocarbons in Stack Gases.
2. ~~Sampling and Analytical (S&A) Methods for Multiple Metals, Hexavalent Chromium, HCl and Chlorine, Polychlorinated Dibenzo-p-dioxins and Dibenzofurans, and Aldehydes and Ketones.~~
32. Procedures for Estimating the Toxicity Equivalency of Chlorinated Dibenzo-p-dioxin and Dibenzofuran Congeners.
43. Hazardous Waste Combustion Air Quality Screening Procedures (HWCAQSP).
54. Simplified Land Use Classification Procedure for Compliance with Tier I and Tier II Limits.
65. Statistical Methodology for Bevill Residue Determinations.
76. Procedures for Determining Default Values for Air Pollution Control System Removal Efficiencies.
87. Procedures for Determining Default Values for Partitioning of Metals, Ash, and Total Chloride/Chlorine.
98. Alternate Methodology for Implementing Metals Controls

~~Additional methods referenced in Subpart H of Part 266 but not included in this document can be found in 40 CFR Parts 60 and 61, and "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (SW-846).~~

~~The CEM performance specifications of section 2.0, the S&A methods of section 3.0 and the toxicity equivalency procedure for dioxins and furans of section 4.0 are required procedures for determining compliance with BIF regulations. The CEM performance specifications and the S&A methods are interim. The finalized CEM performance specifications and methods will be published in SW-846 or 40 CFR Parts 60 and 61.~~

a. Sampling and analytical methods for multiple metals, hexavalent chromium, HCl and chlorine, polychlorinated dibenzo-p-dioxins and dibenzofurans, and aldehydes and ketones can be found in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Publication SW-846). Additional methods referenced in Subpart H of Part 266 but not included in this document can be found in 40 CFR Parts 60 and 61, and SW-846.

b. The CEM performance specifications of section 2.0, the relevant sampling Methods 0011, 0023A, 0050, 0051, 0060, and 0061 of SW-846, incorporated by reference in §260.11, and the toxicity equivalency procedure for dioxins and furans of section 4.0 are required procedures for determining compliance with BIF regulations. For the determination of chloride from HCl/Cl₂

emission sampling train, you must use appropriate methods. For the determination of carbonyl compounds by high-performance liquid chromatography, you must use appropriate methods. The CEM performance specifications are interim. The finalized CEM performance specifications will be published in 40 CFR parts 60 and 61.

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SECTION 3.0 SAMPLING AND ANALYTICAL METHODS

Note: The sampling and analytical methods to the BIF manual are published in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846, as incorporated by reference in §260.11 of these regulations.

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SECTION 4.0 PROCEDURE FOR ESTIMATING THE TOXICITY EQUIVALENCY OF CHLORINATED DIBENZO-P-DIOXIN AND DIBENZOFURAN CONGENERS

PCDDs and PCDFs must be determined using ~~the method given in section 3.4 of this document~~ whichever is the most recent version of SW-846 Method 023A (incorporated by reference in § 260.1) as identified or OAQPS Method 23 of appendix A to Part 60. In this method, individual congeners or homologues¹ are measured and then summed to yield a total PCDD/PCDF value. No toxicity factors are specified in the method to compute risks from such emissions.

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SECTION 10.0 ALTERNATIVE METHODOLOGY FOR IMPLEMENTING METALS CONTROLS

...

10.3 Basis

...

(2) The metal concentrations in the collected kiln dust can be accurately and representatively measured ~~(using procedures specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" (SW-846), incorporated by reference in §260.11).~~

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SECTION 10.0 ALTERNATIVE METHODOLOGY FOR IMPLEMENTING METALS CONTROLS

...

10.5 Implementation Procedures

...

(1) Prepare initial limits and test plans.

- Determine the Tier III metal emission limit. The Tier II metal emission limit may also be used (see §266.106).
- Determine the applicable PM emission standard. This standard is the most stringent particulate emission standard that applies to the facility. A facility may elect to restrict itself to an even more stringent self-imposed PM emission standard, particularly if the facility finds that it is easier to control particulate emissions than to reduce the kiln dust concentration of a certain metal (i.e., lead).
- Determine which metals need to be monitored (i.e., all hazardous metals for which Tier III emission limits are lower than PM emission limits-assuming PM is pure metal).
- Follow the compliance procedures described in Subsection 10.6.
- Follow ~~the appropriate~~ guidelines ~~described in SW-846~~ for preparing test plans and waste analysis plans for the following tests:
 - Compliance tests to determine limits on metal feedrates in pumpable hazardous wastes and in all hazardous wastes (as well as to determine other compliance parameters);
 - Initial tests to determine enrichment factors;
 - Quarterly tests to verify enrichment factors;
 - Analysis of hazardous waste feedstreams; and
 - Daily and/or weekly monitoring of kiln dust for continuing compliance

(2) Conduct tests to determine the enrichment factor.

- These tests must be conducted within a 14-day period. No more than two tests may be conducted in any single day. If the tests are not completed within a 14-day period, they must be repeated.
- Simultaneous stack samples and kiln dust samples must be taken.
 - Stack sampling must be conducted with the multiple metals train according to procedures provided in section 10.3 of this Methods Manual.
 - Kiln dust sampling must be conducted as follows:
 - Follow the sampling and analytical procedures such as those described in ~~SW-846~~ and the waste analysis plan as they pertain to the condition and accessibility of the dust.
 - Samples should be representative of the last ESP or Fabric Filter in the APCS series.

Appendix IX to Part 266 - Methods Manual for Compliance With the BIF Regulations
SECTION 10.0 ALTERNATIVE METHODOLOGY FOR IMPLEMENTING
METALS CONTROLS

...

10.5 Implementation Procedures

...

(5) Monitor metal concentrations in kiln dust for continuing compliance, and maintain compliance with all compliance limits for the duration of interim status.

- Metals to be monitored during compliance testing are classified as either "critical" or "noncritical" metals.
 - All metals must initially be classified as "critical" metals and be monitored on a daily basis.
 - A "critical" metal may be reclassified as a "noncritical" metal if its concentration in the kiln dust remains below 10% of its "conservative" kiln dust metal concentration limit for 30 consecutive daily samples. "Noncritical" metals must be monitored on a weekly basis.
 - A "noncritical" metal must be reclassified as a "critical" metal if its concentration in the kiln dust is above 10% of its "conservative" kiln dust metal concentration limit for any single daily or weekly sample.
- Noncompliance with the sampling and analysis schedule prescribed by this method is a violation of the metals controls under §266.103.
- Follow the sampling, compositing, and analytical procedures described in this method and in ~~SW-846~~ other appropriate methods as they pertain to the condition and accessibility of the kiln dust.
- Follow the same procedures and sample at the same locations as were used for kiln dust samples collected to determine the enrichment factors (as discussed in Step 2).
- Samples must be collected at least once every 8 hours, and a daily composite must be prepared according to ~~SW-846~~ appropriate procedures.
 - At least one composite sample is required. This sample is referred to as the "required" sample.
 - For QA/QC purposes, a facility may elect to collect two or more additional samples. These samples are referred to as the "spare" samples. These additional samples must be collected over the same time period and according to the same procedures as those used for the "required" sample.
 - Samples for "critical" metals must be daily composites.
 - Samples for "noncritical" metals must be weekly composites. These samples can be composites of the original 8-hour samples, or they can be composites of daily composite samples.
- Analyze the "required" sample to determine the concentration of each metal.
 - This analysis must be completed within 48 hours of the close of the sampling period. Failure to meet this schedule is a violation of the metals standards of §266.103.
- If the "conservative" kiln dust metal concentration limit is exceeded for any metal, refer to Step 8.
- If the "conservative" kiln dust metal concentration limit is not exceeded, continue with the daily or weekly monitoring (Step 5) for the duration of interim status.
- Conduct quarterly enrichment factor verification tests, as described in Step 6.

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SECTION 10.0 ALTERNATIVE METHODOLOGY FOR IMPLEMENTING
METALS CONTROLS

...

10.6 Precompliance Procedures

...

(1) Prepare initial limits and test plans.

- Determine the Tier III metal emission limit. The Tier II metal emission limit may also be used (see §266.106).
- Determine the applicable PM emission standard. This standard is the most stringent particulate emission standard that applies to the facility. A facility may elect to restrict itself to an even more stringent self-imposed PM emission standard, particularly if the facility finds that it is easier to control particulate emissions than to reduce the kiln dust concentration of a certain metal (i.e., lead).
- Determine which metals need to be monitored (i.e., all hazardous metals for which Tier III emission limits are lower than PM emission limits, assuming PM is pure metal).
- Follow ~~the appropriate procedures described in SW-846~~ for preparing waste analysis plans for the following tasks:
 - Analysis of hazardous waste feedstreams.
 - Daily and/or weekly monitoring of kiln dust concentrations for continuing compliance.

Appendix IX to Part 266 - Methods Manual for Compliance With the BIF Regulations
SECTION 10.0 ALTERNATIVE METHODOLOGY FOR IMPLEMENTING
METALS CONTROLS

...

10.6 Precompliance Procedures

...

(5) Monitor metal concentration in kiln dust for continuing compliance, and maintain compliance with all precompliance limits until certification of compliance has been submitted.

- Metals to be monitored during precompliance testing are classified as either "critical" or "noncritical" metals.
 - All metals must initially be classified as "critical" metals and be monitored on a daily basis.
 - A "critical" metal may be reclassified as a "noncritical" metal if its concentration in the kiln dust remains below 10% of its "conservative" kiln dust metal concentration limit for 30 consecutive daily samples. "Noncritical" metals must be monitored on a weekly basis, at a minimum.

- A "noncritical" metal must be reclassified as a "critical" metal if its concentration in the kiln dust is above 10% of its "conservative" kiln dust metal concentration limit for any single daily or weekly sample.
- It is a violation if the facility fails to analyze the kiln dust for any "critical" metal on any single day or for any "noncritical" metal during any single week, when hazardous waste is burned.
- Follow the sampling, compositing, and analytical procedures described in this method and in ~~SW-846~~ other appropriate procedures as they pertain to the condition and accessibility of the kiln dust.
-
- Samples must be collected at least once every 8 hours, and a daily composite prepared according to ~~SW-846~~ appropriate procedures.
 - At least one composite sample is required. This sample is referred to as the "required" sample.
 - For QA/QC purposes, a facility may elect to collect two or more additional samples. These samples are referred to as the "spare" samples. These additional samples must be collected over the same time period and according to the same procedures as those used for the "required" sample.
 - Samples for "critical" metals must be daily composites.
 - Samples for "noncritical" metals must be weekly composites, at a minimum. These samples can be composites of the original 8-hour samples, or they can be composites of daily composite samples.
- Analyze the "required" sample to determine the concentration of each metal.
- This analysis must be completed within 48 hours of the close of the sampling period. Failure to meet this schedule is a violation.
- If the "conservative" kiln dust metal concentration limit is exceeded for any metal, refer to Step 8.
- If the "conservative" kiln dust metal concentration limit is not exceeded, continue with the daily and/or weekly monitoring (Step 5) for the duration of interim status.

Section 122.19 Specific Part B requirements for incinerators.

(c)(1)...

- (iii) An identification of any hazardous organic constituents listed in Part 261, Appendix VIII, of these regulations, which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in Part 261, Appendix VIII, of these regulations which would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified and the basis for their exclusion stated. ~~The waste analysis must rely on analytical techniques specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of these regulations and Section 122.6, or their equivalent. The waste analysis must rely on appropriate analytical techniques.~~

(iv) An approximate quantification of the hazardous constituents identified in the waste, within the precision produced by ~~the analytical methods specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of these regulations and Section 122.6~~ appropriate analytical methods.

Section 122.22 Specific Part B information requirements for boilers and industrial furnaces burning hazardous waste.

(a)(2)(ii)...

(B) Results of analyses of each waste to be burned, documenting the concentrations of nonmetal compounds listed in Appendix VIII of Part 261 of these regulations, except for those constituents that would reasonably not be expected to be in the waste. The constituents excluded from analysis must be identified and the basis for their exclusion explained. ~~The analysis must rely on analytical techniques specified in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (incorporated by reference, see Section 260.11). The waste analysis must rely on appropriate analytical techniques.~~

Section 122.62 Hazardous waste incinerator permits.

(b)(2)(i)...

(C) An identification of any hazardous organic constituents listed in Part 261, Appendix VIII of these regulations, which are present in the waste to be burned, except that the applicant need not analyze for constituents listed in Part 261, Appendix VIII, of these regulations which would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified, and the basis for the exclusion stated. ~~The waste analysis must rely on analytical techniques specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of these regulations and Section 122.6, or other equivalent. The waste analysis must rely on appropriate analytical techniques.~~

(D) An approximate quantification of the hazardous constituents identified in the waste, within the precision produced by ~~the analytical methods specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of these regulations and Section 122.6, or their equivalent~~ appropriate analytical methods.

Section 122.66 Permits for boilers and industrial furnaces burning hazardous waste.

(c)(2)

(i) An identification of any hazardous organic constituents listed in Appendix VIII, Part 261, of these regulations that are present in the feed stream, except that the applicant need not analyze for constituents listed in Appendix VIII that would reasonably not be expected to be found in the hazardous waste. The constituents excluded from analysis must be identified and the basis for this exclusion explained.

~~The waste analysis must be conducted in accordance with analytical techniques specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of these regulations and Section 122.6, or their equivalent. The waste analysis must rely on appropriate analytical techniques.~~

(ii) An approximate quantification of the hazardous constituents identified in the hazardous waste, within the precision produced by ~~the analytical methods specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in Section 260.11 of these regulations and Section 122.6, or other equivalent~~ appropriate analytical methods.

Section 279.10 Applicability.

(b)(1)...

(ii) Rebuttable presumption for used oil. Used oil containing more than 1,000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in Subpart D of Part 261 of these regulations. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, by ~~using an analytical method from SW-846, Edition III, to show~~ showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Appendix VIII of Part 261 of these regulations). ~~EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, (202) 783-3238 (document number 955-001-00000-1).~~

Section 279.44 Rebuttable presumption for used oil.

(c) If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in Subpart D of Part 261 of these regulations. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by ~~using an analytical method from SW-846, Edition III, to show~~ showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Appendix VIII of Part 261 of these regulations). ~~EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, (202) 783-3238 (Document Number 955-001-00000-1).~~

Section 279.53 Rebuttable presumption for used oil.

(c) If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in Subpart D of Part 261 of these regulations. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by ~~using an analytical method from SW-846, Edition III, to show~~ showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Appendix

VIII of Part 261 of these regulations). ~~EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. (202) 783-3238 (Document Number 955-001-00000-1).~~

Section 279.63 Rebuttable presumption for used oil.

(c) If the used oil contains greater than or equal to 1,000 ppm total halogens, it is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in Subpart D of Part 261 of these regulations. The owner or operator may rebut the presumption by demonstrating that the used oil does not contain hazardous waste (for example, by ~~using an analytical method from SW-846, Edition III, to show~~ showing that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in Appendix VIII of Part 261 of these regulations). ~~EPA Publication SW-846, Third Edition, is available from the Government Printing Office, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954. (202) 783-3238 (Document Number 955-001-00000-1).~~

AMENDMENT 3:

Background: Delaware proposes to adopt a portion of the amendments made in the federal regulations as a result of the Burden Reduction Initiative. These modifications are found in 71 FR 16862-16915 and RCRA Revision Checklist 213.

Section 260.31 Standards and criteria for variances from classification as a solid waste.

(b) The Secretary may grant requests for a variance from classifying as a solid waste those materials that are reclaimed and then reused as feedstock within the original production process in which the materials were generated if the reclamation operation is an essential part of the production process. This determination will be based on the following criteria:

- (1) How economically viable the production process would be if it were to use virgin materials, rather than the reclaimed materials;
- ~~(2) The prevalence of the practice on an industry-wide basis;~~
- ~~(3)~~ (2) The extent to which the material is handled before reclamation to minimize loss;
- ~~(4)~~ (3) The time periods between generating the material and its reclamation, and between reclamation and return to the original primary production process;
- ~~(5)~~ (4) The location of the reclamation operation in relation to the production process;
- ~~(6)~~ (5) Whether the reclaimed material is used for the purpose for which it was originally produced when it is returned to the original process, and whether it is returned to the process in substantially its original form;
- ~~(7)~~ (6) Whether the person who generates the material also reclaims it;
- ~~(8)~~ (7) Other relevant factors.

Section 261.4 Exclusions.

(a)(9)(iii)...

(E) Prior to operating pursuant to this exclusion, the plant owner or operator ~~submits to the Secretary~~ prepares a one-time notification stating that the plant intends to claim the exclusion, giving the date on which the plant intends to begin operating under the

exclusion, and containing the following language: "I have read the applicable regulation establishing an exclusion for wood preserving wastewaters and spent wood preserving solutions and understand it requires me to comply at all times with the conditions set out in the regulation." The plant must maintain a copy of that document in its on-site records ~~for a period of no less than 3 years from the date specified in the notice~~ until closure of the facility. The exclusion applies only so long as the plant meets all of the conditions. If the plant goes out of compliance with any condition, it may apply to the Secretary for reinstatement. The Secretary may reinstate the exclusion upon finding that the plant has returned to compliance with all conditions and that violations are not likely to recur.

Section 261.4 Exclusions.

(f)...

(9) The facility prepares and submits a report to the Secretary by March 15 of each year that ~~estimates the number of studies and the amount of waste expected to be used in treatability studies during the current year, and~~ includes the following information for the previous calendar year:

Section 264.16 Personnel Training.

(a)...

(4) For facility employees that receive emergency response training pursuant to Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1910.120(p)(8) and 1910.120(q), the facility is not required to provide separate emergency response training pursuant to this section, provided that the overall facility training meets all the requirements of this section.

Section 264.52 Content of contingency plan.

(b) If the owner or operator has already prepared a Spill Prevention, Control, and ~~Countermeasures~~ Countermeasure (SPCC) Plan in accordance with 40 CFR Part 112 or some other emergency or contingency plan, he need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this part. The owner or operator may develop one contingency plan which meets all regulatory requirements. DNREC recommends that the plan be based on the National Response Team's Integrated Contingency Plan Guidance ("One Plan"). When modifications are made to non-RCRA provisions in an integrated contingency plan, the changes do not trigger the need for a RCRA permit modification.

Section 264.73 Operating Record.

(b)...

(1) A description and the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage, or disposal at the facility as required by Appendix I of this part;

(2) The location of each hazardous waste within the facility and the quantity at each location. For disposal facilities, the location and quantity of each hazardous waste must be recorded on a map or diagram ~~of that shows~~ each cell or disposal area. For all facilities, this information must include cross-references to ~~specific~~ manifest document numbers, if the waste was accompanied by a manifest. [Comment: See §264.119 for related requirements.];

...

(8) All closure cost estimates under §264.142, and for disposal facilities, all post-closure cost estimates under §264.144 of this part;

...

(10) Records of the quantities (and date of placement) for each shipment of hazardous waste placed in land disposal units under an extension to the effective date of any land disposal restriction granted pursuant to §268.5, a petition pursuant to §268.6, ~~or a certification under §268.8~~, and the applicable notice required by a generator under §268.7(a);

(11) For an off-site treatment facility, a copy of the notice, and the certification and demonstration, if applicable, required by a the generator or the owner or operator under §268.7 ~~or §268.8~~;

(12) For an on-site treatment facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator under §268.7 ~~or §268.8~~;

(13) For an off-site land disposal facility, a copy of the notice, and the certification and demonstration if applicable, required by the generator or the owner or operator of a treatment facility under §268.7 ~~and §268.8~~, whichever is applicable;

(14) For an on-site land disposal facility, the information contained in the notice required by the generator or owner or operator of a treatment facility under §268.7, except for the manifest number, ~~and the certification and demonstration if applicable, required under §268.8, whichever is applicable~~;

(15) For an off-site storage facility, a copy of the notice, ~~and the certification and demonstration if applicable~~, required by the generator or the owner or operator under §268.7 ~~or §268.8~~;

(16) For an on-site storage facility, the information contained in the notice (except the manifest number), ~~and the certification and demonstration if applicable~~, required by the generator or the owner or operator under §268.7 ~~or §268.8~~; ~~and~~

(17) Any records required under §264.1(j)(13); and

(18) Certifications as required by §264.196(f).

Section 264.98 Detection monitoring program

(g)...

(2) Immediately sample the ground water in all monitoring wells and determine whether constituents in the list of Appendix IX of ~~Part 264~~ this part are present, and if so, in what concentration. However, the Secretary, on a discretionary basis, may allow sampling for a site-specific subset of constituents from the appendix IX list of this part and other representative/related waste constituents.

(3) For any Appendix IX compounds found in the analysis pursuant to paragraph

(g)(2) of this section, the owner or operator may resample within one month or at an alternative site-specific schedule approved by the Secretary and repeat the analysis for those compounds detected. If the results of the second analysis confirm the initial results, then these constituents will form the basis for compliance monitoring. If the owner or operator does not resample for the compounds ~~found pursuant to in~~ paragraph (g)(2) of this section, the hazardous constituents found during this initial Appendix IX analysis will form the basis for compliance monitoring.

Section 264.99 Compliance monitoring program.

~~(g) The owner or operator must analyze samples from all monitoring wells at the compliance point for all constituents contained in Appendix IX of Part 264 at least annually to determine whether additional hazardous constituents are present in the uppermost aquifer and, if so, at what concentration, pursuant to procedures in §264.98(f). If the owner or operator finds Appendix IX constituents in the ground water that are not already identified in the permit as monitoring constituents, the owner or operator may resample within one month and repeat the Appendix IX analysis. If the second analysis confirms the presence of new constituents, the owner or operator must report the concentration of these additional constituents to the Secretary within seven days after the completion of the second analysis and add them to the monitoring list. If the owner or operator chooses not to resample, then he or she must report the concentrations of these additional constituents to the Secretary within seven days after completion of the initial analysis and add them to the monitoring list. Annually, the owner or operator must determine whether additional hazardous constituents from appendix IX of this part, which could possibly be present but are not on the detection monitoring list in the permit, are actually present in the uppermost aquifer and, if so, at what concentration, pursuant to procedures in §264.98(f). To accomplish this, the owner or operator must consult with the Secretary to determine on a case-by-case basis: which sample collection event during the year will involve enhanced sampling; the number of monitoring wells at the compliance point to undergo enhanced sampling; the number of samples to be collected from each of these monitoring wells; and, the specific constituents from Appendix IX of this part for which these samples must be analyzed. If the enhanced sampling event indicates that Appendix IX constituents are present in the ground water that are not already identified in the permit as monitoring constituents, the owner or operator may resample within one month or at an alternative site-specific schedule approved by the Secretary, and repeat the analysis. If the second analysis confirms the presence of new constituents, the owner or operator must report the concentration of these additional constituents to the Secretary within seven days after the completion of the second analysis and add them to the monitoring list. If the owner or operator chooses not to resample, then he or she must report the concentrations of these additional constituents to the Secretary within seven days after completion of the initial analysis, and add them to the monitoring list.~~

Section 264.115 Certification of closure.

Within 60 days of completion of closure of each hazardous waste surface impoundment, waste pile, land treatment, and landfill unit, and within 60 days of the completion of final closure, the owner or operator must submit to the Secretary, by registered mail, a certification

that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved closure plan.

The certification must be signed by the owner or operator and by ~~an independent registered professional engineer's~~ a qualified Professional Engineer. Documentation supporting the ~~independent registered professional engineer's~~ Professional Engineer's certification must be furnished to the Secretary upon request until he releases the owner or operator from the financial assurance requirements for closure under §264.143(i).

Section 264.120 Certification of completion of post-closure care.

No later than 60 days after completion of the established post-closure care period for each hazardous waste disposal unit, the owner or operator must submit to the Secretary, by registered mail, a certification that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the owner or operator and ~~an independent registered professional engineer~~ a qualified Professional Engineer. Documentation supporting the ~~independent registered professional engineer's~~ Professional Engineer's certification must be furnished to the Secretary upon request until he releases the owner or operator from the financial assurance requirements for post-closure care under §264.145(i).

Section 264.143 Financial assurance for closure.

(i) Release of the owner or operator from the requirements of this section. Within 60 days after receiving certifications from the owner or operator and ~~an independent registered professional engineer~~ a qualified Professional Engineer that final closure has been completed in accordance with the approved closure plan, the Secretary will notify the owner or operator in writing that he is no longer required by this section to maintain financial assurance for final closure of the facility, unless the Secretary has reason to believe that final closure has not been in accordance with the approved closure plan. The Secretary shall provide the owner or operator a detailed written statement of any such reason to believe that closure has not been in accordance with the approved closure plan.

Section 264.145 Financial assurance for post-closure care.

(i) Release of the owner or operator from the requirements of this section. Within 60 days after receiving certifications from the owner or operator and ~~an independent registered professional engineer~~ a qualified Professional Engineer that the post-closure care period has been completed for a hazardous waste disposal unit in accordance with the approved plan, the Secretary will notify the owner or operator that he is no longer required to maintain financial assurance for post-care of that unit, unless the Secretary has reason to believe that post-closure care has not been in accordance with the approved post-closure plan. The Secretary shall provide the owner or operator with a detailed written statement of any such reason to believe that post-closure care has not been in accordance with the approved post-closure plan.

Section 264.147 Liability requirements.

(e) Period of coverage. Within 60 days after receiving certifications from the owner or operator and ~~an independent registered professional engineer~~ a qualified Professional Engineer that final closure has been completed in accordance with the approved closure plan, the Secretary will notify the owner or operator in writing that he is no longer required by this section to maintain liability coverage for that facility, unless the Secretary has reason to believe that closure has not been in accordance with the approved closure plan.

Section 264.191 Assessment of existing tank system's integrity.

(a) For each existing tank system that does not have secondary containment meeting the requirements of §264.193, the owner or operator must determine that the tank system is not leaking or is unfit for use. Except as provided in paragraph (c) of this section, the owner or operator must obtain and keep on file at the facility a written assessment reviewed and certified by ~~an independent, qualified registered professional engineer~~ a qualified Professional Engineer, in accordance with §122.11(d), that attests to the tank system's integrity by January 12, 1988.

...

(b)(5)...

(ii) For other than non-enterable underground tanks and for ancillary equipment, this assessment must include either a leak test, as described above, or other integrity examination, that is certified by ~~an independent, qualified, registered professional engineer~~ a qualified Professional Engineer in accordance with §122.11(d), that addresses cracks, leaks, corrosion, and erosion.

Section 264.192 Design and installation of new tank systems or components.

(a) Owners or operators of new tank systems or components must obtain and submit to the Secretary at time of submittal of ~~part~~ Part B information, a written assessment, reviewed and certified by ~~an independent, qualified registered professional engineer~~ a qualified Professional Engineer, in accordance with §122.11(d), attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The assessment must show that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection to ensure that it will not collapse, rupture, or fail. This assessment, which will be used by the Secretary to review and approve or disapprove the acceptability of the tank system design, must include, at a minimum, the following information:

...

(b) The owner or operator of a new tank system must ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or ~~an independent, qualified, registered professional engineer~~ a qualified Professional Engineer, either of whom is trained and experienced in the proper installation of tank systems or components, must inspect the system for the presence of any of the following items:

Section 264.193 Containment and detection of releases.

(a) In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this section must be provided (except as provided in paragraphs (f) and (g) of this section):

(1) For all new and existing tank systems or components, prior to their being put into service;

~~(2) For all existing tank systems used to store or treat EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027, within two years after January 12, 1987;~~

~~(3) For those existing tank systems of known and documented age, within two years after January 12, 1987 or when the tank system has reached 15 years of age, whichever comes later;~~

~~(4) For those existing tank systems for which the age cannot be documented, within eight years of January 12, 1987; but if the age of the facility is greater than seven years, secondary containment must be provided by the time the facility reaches 15 years of age, or within two years of January 12, 1987, whichever comes later, and~~

~~(5) For tank systems that store or treat materials that become hazardous wastes subsequent to January 12, 1987, within the time intervals required in paragraphs (a)(1) through (a)(4) of this section, except that the date that a material becomes a hazardous waste must be used in place of January 12, 1987.~~

(2) For tank systems that store or treat materials that become hazardous wastes, within two years of the hazardous waste listing, or when the tank system has reached 15 years of age, whichever comes later.

...

(i) All tank systems, until such time as secondary containment that meets the requirements of this section is provided, must comply with the following:

...

(2) For other than non-enterable underground tanks, the owner or operator must either conduct a leak test as in paragraph (i)(1) ~~or (ii)~~ of this section or develop a schedule and procedure for an assessment of the overall condition of the tank system by ~~an independent, qualified registered professional engineer~~ a qualified Professional Engineer. The schedule and procedure must be adequate to detect obvious cracks, leaks, and corrosion or erosion that may lead to cracks and leaks. The owner or operator must remove the stored waste from the tank, if necessary, to allow the condition of all internal tank surfaces to be assessed. The frequency of these assessments must be based on the material of construction of the tank and its ancillary equipment, the age of the system, the type of corrosion or erosion protection used, the rate of corrosion or erosion observed during the previous inspection, and the characteristics of the waste being stored or treated.

Section 264.196 Response to leaks or spills and disposition of leaking or unfit-for-use tank systems.

(f) Certification of major repairs. If the owner/operator has repaired a tank system in accordance with paragraph (e) of this section, and the repair has been extensive (e.g.,

installation of an internal liner; repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service unless the owner/operator has obtained a certification by ~~an independent, qualified, registered professional engineer~~ a qualified Professional Engineer in accordance with §122.11(d) that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification must be submitted to the Secretary within seven days after returning the tank system to use.

Section 264.251 Design and operating requirements.

(c) The owner or operator of each new waste pile unit ~~on which construction commences after January 29, 1992~~, each lateral expansion of a waste pile unit ~~on which construction commences after July 29, 1992~~, and each replacement of an existing waste pile unit ~~that is to commence reuse after July 29, 1992~~ must install two or more liners and a leachate collection and removal system above and between such liners. "Construction commences" is as defined in § 260.10 under "existing facility".

Section 264.280 Closure and post-closure care.

(b) For the purpose of complying with §264.115, when closure is completed the owner or operator may submit to the Secretary certification by an independent qualified soil scientist, in lieu of ~~an independent registered professional engineer~~ a qualified Professional Engineer, that the facility has been closed in accordance with the specifications in the approved closure plan.

Section 264.314 Special Requirements for Bulk and Containerized Liquids.

~~(a) Bulk or non-containerized liquid waste or waste containing free liquids may be placed in a landfill prior to May 8, 1985 only if:~~

- ~~(1) The landfill has a liner and leachate collection and removal system that meet the requirements of §264.301(a); or~~
- ~~(2) Before disposal, the liquid waste or waste containing free liquids is treated or stabilized, chemically or physically (e.g., by mixing with a sorbent solid), so that free liquids are no longer present.~~

~~(b)~~ (a) Effective May 8, 1985, the The placement of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids (whether or not sorbents have been added) in any landfill is prohibited.

~~(c)~~ (b) To demonstrate the absence or presence of free liquids in either a containerized or a bulk waste, the following test must be used: Method ~~9095~~ 9095B (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." EPA Publication SW-846, as incorporated by reference in §260.11 of these regulations.

~~(d)~~ (c) Containers holding free liquids must not be placed in a landfill unless:

- (1) All free-standing liquid:
 - (i) Has been removed by decanting, or other methods;
 - (ii) ~~has~~ Has been mixed with sorbent or solidified so that free-standing liquid is no longer observed; or

- (iii) Has been otherwise eliminated; or
 - (2) The container is very small, such as an ampule; or
 - (3) The container is designed to hold free liquids for use other than storage, such as a battery or capacitor; or
 - (4) The container is a lab pack as defined in §264.316 and is disposed of in accordance with §264.316.
- ~~(e)~~ (d) Sorbents used to treat free liquids to be disposed of in landfills must be nonbiodegradable. Nonbiodegradable sorbents are: materials listed or described in paragraph ~~(e)(1)(d)(1)~~ of this section; materials that pass one of the tests in paragraph ~~(e)(2)(d)(2)~~ of this section; or materials that are determined by EPA to be nonbiodegradable through the Part 260 petition process.
 - (1) Nonbiodegradable sorbents.
 - (i) Inorganic minerals, other inorganic materials, and elemental carbon (e.g., aluminosilicates, clays, smectites, Fuller's earth, bentonite, calcium bentonite, montmorillonite, calcined montmorillonite, kaolinite, micas (illite), vermiculites, zeolites; calcium carbonate (organic free limestone); oxides/hydroxides, alumina, lime, silica (sand), diatomaceous earth; perlite (volcanic glass); expanded volcanic rock; volcanic ash; cement kiln dust; fly ash; rice hull ash; activated charcoal/activated carbon); or
 - (ii) High molecular weight synthetic polymers (e.g., polyethylene, high density polyethylene (HDPE), polypropylene, polystyrene, polyurethane, polyacrylate, polynorborene, polyisobutylene, ground synthetic rubber, cross-linked allylstyrene and tertiary butyl copolymers). This does not include polymers derived from biological material or polymers specifically designed to be degradable; or
 - (iii) Mixtures of these nonbiodegradable materials.
 - (2) Tests for nonbiodegradable sorbents.
 - (i) The sorbent material is determined to be nonbiodegradable under ASTM Method G21-70 (1984a)-Standard Practice for Determining Resistance of Synthetic Polymer Materials to Fungi; or
 - (ii) The sorbent material is determined to be nonbiodegradable under ASTM Method G22-76 (1984b)-Standard Practice for Determining Resistance of Plastics to Bacteria; or
 - (iii) The sorbent material is determined to be non-biodegradable under OECD test 301B: [CO₂ Evolution (Modified Sturm Test)].
- ~~(f)~~ (e) ~~Effective November 8, 1985, the~~ The placement of any liquid which is not a hazardous waste in a landfill is prohibited unless the owner or operator of such landfill demonstrates to the Secretary, or the Secretary determines, that:
 - (1) The only reasonably available alternative to the placement in such landfill is placement in a landfill or unlined surface impoundment, whether or not permitted or operating under interim status, which contains, or may reasonably be anticipated to contain, hazardous waste; and
 - (2) Placement in such owner or operator's landfill will not present a risk of contamination of any "underground source of drinking water" (as that term is defined in §122.2 of these regulations.)

Section 264.347 Monitoring and Inspections.

(d) This monitoring and inspection data must be recorded and the records must be placed in the operating log record required by §264.73.

Section 264.554 Staging piles.

(c)...

(2) Certification by ~~an independent, qualified, registered professional engineer~~ a qualified Professional Engineer for technical data, such as design drawings and specifications, and engineering studies, unless the Secretary determines, based on information that you provide, that this certification is not necessary to ensure that a staging pile will protect human health and the environment; and

Section 264.571 Assessment of existing drip pad integrity.

(a) For each existing drip pad as defined in §264.570 of this subpart, the owner or operator must evaluate the drip pad and determine that it meets all of the requirements of this subpart, except the requirements for liners and leak detection systems of §264.573(b). No later than the effective date of this rule, the owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by ~~an independent, qualified registered professional engineer~~ a qualified Professional Engineer that attests to the results of the evaluation. The assessment must be reviewed, updated and re-certified annually until all upgrades, repairs, or modifications necessary to achieve compliance with all of the standards of §264.573 of this subpart are complete. The evaluation must document the extent to which the drip pad meets each of the design and operating standards of §264.573 ~~of this subpart~~, except the standards for liners and leak detection systems, specified in §264.573(b) ~~of this subpart~~.

(b) The owner or operator must develop a written plan for upgrading, repairing, and modifying the drip pad to meet the requirements of §264.573(b) ~~of this subpart~~, and submit the plan to the Secretary no later than 2 years before the date that all repairs, upgrades, and modifications are complete. This written plan must describe all changes to be made to the drip pad in sufficient detail to document compliance with all the requirements of §264.573 of this subpart. The plan must be reviewed and certified by ~~an independent qualified registered professional engineer~~ a qualified Professional Engineer.

(c) Upon completion of all upgrades, repairs, and modifications, the owner or operator must submit to the Secretary, the as-built drawings for the drip pad together with a certification by ~~an independent qualified registered professional engineer~~ a qualified Professional Engineer attesting that the drip pad conforms to the drawings.

Section 264.573 Design and operating requirements.

(a)(4)...

(ii) The owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by ~~an independent, qualified registered professional engineer~~ a qualified Professional Engineer that attests to the

results of the evaluation. The assessment must be reviewed, updated and ~~re-certified~~ re-certified annually. The evaluation must document the extent to which the drip pad meets the design and operating standards of this section, except for paragraph (b) of this section.

...

(g) The drip pad must be evaluated to determine that it meets the requirements of paragraphs (a) through (f) of this section and the owner or operator must obtain a statement from ~~an independent, qualified registered professional engineer~~ a qualified Professional Engineer certifying that the drip pad design meets the requirements of this section.

Section 264.574 Inspections.

(a) During construction or installation, liners and cover systems (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage and imperfections (e.g., holes, cracks, thin spots, or foreign materials). Immediately after construction or installation, liners must be inspected and certified as meeting the requirements of §264.573 of this subpart by ~~an independent qualified, registered professional engineer~~ a qualified Professional Engineer.

Section 264.1100 Applicability.

The requirements of this subpart apply to owners or operators who store or treat hazardous waste in units designed and operated under §264.1101 of this subpart. ~~These provisions will become effective on February 18, 1993, although owner or operator may notify the Secretary of his intent to be bound by this subpart at an earlier time.~~ The owner or operator is not subject to the definition of land disposal in RCRA section 3004(k) provided that the unit:

Section 264.1101 Design and operating standards.

(c)...

~~(2) Obtain certification by a qualified registered professional engineer that the containment building design meets the requirements of paragraphs (a) through (c) of this section. For units placed into operation prior to February 18, 1993, this certification must be placed in the facility's operating record (on-site files for generators who are not formally required to have operating records) no later than 60 days after the date of initial operation of the unit. After February 18, 1993, PE certification will be required prior to operation of the unit. Obtain and keep on-site a~~ certification by a qualified Professional Engineer that the containment building design meets the requirements of paragraphs (a), (b), and (c) of this section.

Section 265.15 General Inspection Requirements.

(b)...

(4) The frequency of inspection may vary for the items on the schedule. However, the frequency should be based on the rate of deterioration of the equipment and the probability of an environmental or human health incident if the deterioration, malfunction, or ~~any~~ operator error goes undetected between inspections. Areas subject to spills, such as loading and

unloading areas, must be inspected daily when in use. At a minimum, the inspection schedule must include the items and frequencies called for in §§ 265.174, 265.193, 265.195, 265.226, 265.260, 265.278, 265.304, 265.347, 265.377, 265.403, 265.1033, 265.1052, 265.1053, 265.1058, and 265.1084 through 265.1090 ~~of this part~~, where applicable.

Section 265.16 Personnel Training.

(a)...

(4) For facility employees that receive emergency response training pursuant to Occupational Safety and Health Administration (OSHA) regulations 29 CFR 1910.120(p)(8) and 1910.120(q), the facility is not required to provide separate emergency response training pursuant to this section, provided that the overall facility training meets all the requirements of this section.

Section 265.52 Content of Contingency Plan.

(b) If the owner or operator has already prepared a Spill Prevention, Control, and ~~countermeasures~~ Countermeasures (SPCC) Plan in accordance with 40 CFR Part 112 or some other emergency or contingency plan, he need only amend that plan to incorporate hazardous waste management provisions that are sufficient to comply with the requirements of this part. The owner or operator may develop one contingency plan which meets all regulatory requirements. EPA recommends that the plan be based on the National Response Team's Integrated Contingency Plan Guidance ("One Plan"). When modifications are made to non-RCRA provisions in an integrated contingency plan, the changes do not trigger the need for a RCRA permit modification.

Section 265.73 Operating Record.

(b)...

(1) A description and the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage, or disposal at the facility as required by Appendix I of this part;

(2) The location of each hazardous waste within the facility and the quantity at each location. For disposal facilities, the location and quantity of each hazardous waste must be recorded on a map or diagram ~~of~~ that shows each cell or disposal area. For all facilities, this information must include cross-references to ~~specific~~ manifest document numbers; if the waste was accompanied by a manifest;

[**Comment:** See §§ 265.119, 265.279, and 265.309 for related requirements.]

...

(6) Monitoring, testing or analytical data, and corrective action where required by Subpart F of this part and by §§ 265.19, 265.90, 265.94, 265.191, 265.193, 265.195, ~~265.222, 265.223, 265.224,~~ 265.226, 265.255, 265.259, 265.260, 265.276, 265.278, 265.280(d)(1), 265.302 through 265.304, 265.347, 265.377, 265.1034(c) through 265.1034(f), 265.1035, 265.1063(d) through 265.1063(i), 265.1064, and 265.1083 through 265.1090 ~~of this part~~.

[**Comment:** As required by §265.94, monitoring data at disposal facilities must be kept throughout the post-closure period.]

...

(8) Records of the quantities (and date of placement) for each shipment of hazardous waste placed in land disposal units under an extension to the effective date of any land disposal restriction granted pursuant to §268.5 of these regulations, or monitoring data required pursuant to a petition under §268.6 of these regulations, or ~~a certification under §268.8~~ and the applicable notice required by a generator under §268.7 of these regulations.

(9) For an off-site treatment facility, a copy of the notice, and the certification and demonstration if applicable, required by the generator or the owner or operator under §268.7 ~~or §268.8~~;

(10) For an on-site treatment facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator under §268.7 ~~or §268.8~~.

(11) For an off-site land disposal facility, a copy of the notice; and the certification and demonstration if applicable, required by the generator or the owner or operator of a treatment facility under §268.7 ~~or applicable §268.8~~;

(12) For an on-site land disposal facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator of a treatment facility under §268.7 ~~or §268.8~~.

(13) For an off-site storage facility, a copy of the notice, and the certification and demonstration if applicable, required by the generator or the owner or operator under §268.7 ~~or 268.8~~; and

(14) For an on-site storage facility, the information contained in the notice (except the manifest number), and the certification and demonstration if applicable, required by the generator or the owner or operator of a treatment facility under §§268.7 ~~or 268.8~~.

Section 265.90 Applicability.

(e)...

(1) By the effective date of these amendments, submit to the Secretary a specific plan, certified by a "qualified engineer" or "qualified geologist" which satisfies the requirements of ~~§264.93(d)(3)~~ 265.93(d)(3) for an alternate groundwater monitoring system; This plan is to be placed in the facility's operating record and maintained until closure of the facility.

...

(3) Prepare and submit a written report in accordance with §265.93 (d)(5) and place in the facility's operating record until closure of the facility.

Section 265.93 Preparation, Evaluation and Response.

(d)...

(2) Within 15 days after the notification under paragraph (d)(1) of this section, the owner or operator must develop and submit to the Secretary a specific plan, based on the outline required under paragraph (a) of this section and certified by a "qualified engineer" or "qualified geologist" for a ground-water quality assessment program at the facility. This report is to be placed in the facility's operating record and maintained until closure of the facility.

...

(5) The owner or operator must make his first determination under paragraph (d)(4) of this

section as soon as technically feasible, and, within 15 days after that determination, submit to the Secretary a written report containing an assessment of the ground-water quality. This report is to be placed in the facility's operating record and maintained until closure of the facility.

Section 265.115 Certification of closure.

Within 60 days of completion of closure of each hazardous waste surface impoundment, waste pile, land treatment, and landfill unit, and within 60 days of completion of final closure, the owner or operator must submit to the Secretary, by registered mail, a certification that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications in the approved closure plan. The certification must be signed by the owner or operator and by ~~an independent registered professional engineer~~ a qualified Professional Engineer. Documentation supporting the ~~independent registered professional engineer's~~ qualified Professional Engineer's certification must be furnished to the Secretary upon request until he releases the owner or operator from the financial assurance requirements for closure under §265.143(h).

Section 265.120 Certification of Completion of Post-Closure Care.

No later than 60 days after the completion of the established post-closure care period for each hazardous waste disposal unit, the owner or operator must submit to the Secretary, by registered mail, a certification that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications in the approved post-closure plan. The certification must be signed by the owner or operator and ~~an independent registered professional engineer~~ a qualified Professional Engineer. Documentation supporting the ~~independent registered professional engineer's~~ qualified Professional Engineer's certification must be furnished to the Secretary upon request until he releases the owner or operator from the financial assurance requirements for post-closure care under §265.145(h).

Section 265.143 Financial Assurance for Closure.

(h) Release of the owner or operator from the requirements of this section. Within 60 days after receiving certifications from the owner or operator and ~~an independent registered professional engineer~~ a qualified Professional Engineer that final closure has been completed in accordance with the approved closure plan, the Secretary will notify the owner or operator in writing that he is no longer required by this section to maintain financial assurance for final closure of the facility, unless the Secretary has reason to believe that final closure has not been in accordance with the approved closure plan. The Secretary shall provide the owner or operator a detailed written statement of any such reason to believe that closure has not been in accordance with the approved closure plan.

Section 265.145 Financial assurance for post-closure care.

(h) Release of the owner or operator from the requirements of this section. Within 60 days after receiving certifications from the owner or operator and ~~an independent registered~~

~~professional engineer~~ a qualified Professional Engineer that the post-closure care period has been completed in accordance with the approved post-closure plan, the Secretary will notify the owner or operator in writing that he is no longer required by this Section to maintain financial assurance for ~~post-closure~~ post-closure care of that unit, unless the Secretary has reason to believe that post-closure care has not been in accordance with the approved post-closure plan. The Secretary will provide the owner or operator a detailed written statement of any such reason to believe that post-closure care has not been in accordance with the approved post-closure plan.

Section 265.147 Liability Requirements.

(e) Period of coverage. Within 60 days after receiving certifications from the owner or operator and ~~an independent registered professional engineer~~ a qualified Professional Engineer that final closure has been completed in accordance with the approved closure plan, the Secretary will notify the owner or operator in writing that he is no longer required by this section to maintain liability coverage for that facility, unless the Secretary has reason to believe that closure has not been in accordance with the approved closure plan.

Section 265.191 Assessment of existing tank system's integrity.

(a) For each existing tank system that does not have secondary containment meeting the requirements of §265.193, the owner or operator must determine that the tank system is not leaking or is unfit for use. Except as provided in paragraph (c) of this section, the owner or operator must obtain and keep on file at the facility a written assessment reviewed and certified by ~~an independent, qualified, registered professional engineer~~ a qualified Professional Engineer in accordance with §122.11(d), that attests to the tank system's integrity by January 12, 1988.

Section 265.191 Assessment of existing tank system's integrity.

(b)(5)...

(ii) For other than non-enterable underground tanks and for ancillary equipment, this assessment must be either a leak test, as described above, or an internal inspection and/or other tank integrity examination certified by ~~an independent, qualified, registered professional engineer~~ a qualified Professional Engineer in accordance with §122.11(d) that addresses cracks, leaks, corrosion, and erosion.

Section 265.192 Design and installation of new tank systems or components.

(a) Owners or operators of new tank systems or components must ensure that the foundation, structural support, seams, connections, and pressure controls (if applicable) are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste(s) to be stored or treated, and corrosion protection so that it will not collapse, rupture, or fail. The owner or operator must obtain a written assessment reviewed and certified by ~~an independent, qualified, registered professional engineer~~ a qualified Professional Engineer in accordance with §122.11(d) attesting that the system has sufficient structural integrity and is

acceptable for the storing and treating of hazardous waste. This assessment must include, at a minimum, the following information:

...

(b) The owner or operator of a new tank system must ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Prior to covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or ~~an independent, qualified, registered professional engineer~~ a qualified Professional Engineer, either of whom is trained and experienced in the proper installation of tank systems must inspect the system or component for the presence of any of the following items:

Section 265.193 Containment and detection of releases.

(a)...

(1) For all new and existing tank systems or components, prior to their being put into service;

~~(2) For all existing tanks used to store or treat EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, and F027, within two years after January 12, 1987;~~

~~(3) For those existing tank systems of known and documentable age, within two years after January 12, 1987, or when the tank systems have reached 15 years of age, whichever comes later;~~

~~(4) For those existing tank systems for which the age cannot be documented, within eight years of January 12, 1987; but if the age of the facility is greater than seven years, secondary containment must be provided by the time the facility reaches 15 years of age, or within two years of January 12, 1987, whichever comes later, and~~

~~(5) For tank systems that store or treat materials that become hazardous wastes subsequent to January 12, 1987, within the time intervals required in paragraphs (a)(1) through (a)(4) of this section, except that the date that a material becomes a hazardous waste must be used in place of January 12, 1987.~~

(2) For tank systems that store or treat materials that become hazardous wastes, within 2 years of the hazardous waste listing, or when the tank system has reached 15 years of age, whichever comes later.

Section 265.193 Containment and detection of releases.

(i)...

(2) For other than non-enterable underground tanks, and for all ancillary equipment, an annual leak test, as described in paragraph (i)(1) of this section, or an internal inspection or other tank integrity examination by ~~an independent, qualified, registered professional engineer~~ a qualified Professional Engineer that addresses cracks, leaks, corrosion, ~~and~~ or erosion must be conducted at least annually. The owner or operator must remove the stored waste from the tank, if necessary, to allow the condition of all internal tank surfaces to be assessed.

Section 265.196 Response to leaks or spills and disposition of leaking or unfit-for-use

tank systems.

(f) Certification of major repairs. If the owner or operator has repaired a tank system in accordance with paragraph (e) of this section, and the repair has been extensive (e.g., installation of an internal liner, repair of a ruptured primary containment or secondary containment vessel), the tank system must not be returned to service unless the owner/operator has obtained a certification by ~~an independent, qualified, registered professional engineer~~ a qualified Professional Engineer in accordance with §122.11(d) that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This certification must be submitted to the Secretary within seven days after returning the tank system to use.

Section 265.221 Design and operating requirements.

(a) The owner or operator of each new surface impoundment unit ~~on which construction commences after January 29, 1992~~, each lateral expansion of a surface impoundment unit ~~on which construction commences after July 29, 1992~~, and each replacement of an existing surface impoundment unit ~~that is to commence reuse after July 29, 1992~~ must install two or more liners and a leachate collection and removal system between such liners, and operate the leachate collection and removal system, in accordance with §264.221(c), unless exempted under §264.221(d), (e), or (f), of these regulations. ~~"Construction commences" is as defined in §260.10 of these regulations under "existing facility".~~

Section ~~265.223~~ 265.224 Response actions.

(a) The owner or operator of surface impoundment units subject to §265.221(a) must submit a response action plan to the Secretary when submitting the proposed action leakage rate under §265.222. The response action plan must set forth the actions to be taken if the action leakage rate has been exceeded. At a minimum, the response action plan must describe the actions specified in paragraph (b) of this section.

Section ~~265.224~~ [Reserved]

Section 265.280 Closure and post-closure.

(e) For the purpose of complying with §265.115, when closure is completed the owner or operator may submit to the Secretary certification both by the owner or operator and by an independent qualified soil scientist, in lieu of ~~an independent registered professional engineer~~ a qualified Professional Engineer, that the facility has been closed in accordance with the specifications in the approved closure plan.

Section 265.301 Design and operating requirements.

(a) The owner or operator of each new landfill unit ~~on which construction commences after January 29, 1992~~, each lateral expansion of a landfill unit ~~on which construction commences after July 29, 1992~~, and each such replacement of an existing landfill unit ~~that is to~~

~~commence reuse after July 29, 1992~~ must install two or more liners and a leachate collection and removal system above and between such liners, and operate the leachate collection and removal systems, in accordance with §264.301(c) unless exempted under §264.301(d), (e), or (f), of these regulations. ~~"Construction commences" is as defined in §260.10 of these regulations under "existing facility".~~

Section 265.314 Special requirements for liquid bulk and containerized liquids.

~~(a) Bulk or non-containerized liquid waste or waste containing free liquids may be placed in a landfill prior to May 8, 1985 only if:~~

- ~~(1) The landfill has a liner and leachate collection and removal system that meets the requirements of §264.301(a) of these regulations; or~~
- ~~(2) Before disposal, the liquid waste or waste containing free liquids is treated or stabilized, chemically or physically (e.g., by mixing with a sorbent solid), so that free liquids are no longer present.~~

~~(b)(a)~~ Effective May 8, 1985, the The placement of bulk or non-containerized liquid hazardous waste or hazardous waste containing free liquids (whether or not sorbents have been added) in any landfill is prohibited.

~~(e)(b)~~ Containers holding free liquids must not be placed in a landfill unless:

- (1) All free-standing liquid;
 - (i) has been removed by decanting, or other methods;
 - (ii) has been mixed with sorbent or solidified so that free-standing liquid is no longer observed; or
 - (iii) had been otherwise eliminated; or
- (2) The container is very small, such as an ampule; or
- (3) The container is designed to hold free liquids for use other than storage such as a battery or capacitor; or
- (4) The container is a lab pack as defined in §265.316 and is disposed of in accordance with §265.316.

~~(d)(c)~~ To demonstrate the absence or presence of free liquids in either a containerized or a bulk waste, the following test must be used: Method 9095 9095B (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as incorporated by reference in §260.11 of these regulations.

~~(e)(d)~~ The date for compliance with paragraph (a) of this section is November 19, 1981. The date for compliance with paragraph (c) of this section is March 22, 1982.

~~(f)(e)~~ Sorbents used to treat free liquids to be disposed of in landfills must be nonbiodegradable. Nonbiodegradable sorbents are: materials listed or described in paragraph (f)(1) of this section; materials that pass one of the tests in paragraph (f)(2) of this section; or materials that are determined by EPA to be nonbiodegradable through the Part 260 petition process.

(1) Nonbiodegradable sorbents.

- (i) Inorganic minerals, other inorganic materials, and elemental carbon (e.g., aluminosilicates, clays, smectites, Fuller's earth, bentonite, calcium bentonite, montmorillonite, calcined montmorillonite, kaolinite, micas (illite), vermiculites, zeolites; calcium carbonate (organic free limestone); oxides/hydroxides, alumina, lime, silica (sand), diatomaceous earth; perlite

(volcanic glass); expanded volcanic rock; volcanic ash; cement kiln dust; fly ash; rice hull ash; activated charcoal/activated carbon); or

(ii) High molecular weight synthetic polymers (e.g., polyethylene, high density polyethylene (HDPE), polypropylene, polystyrene, polyurethane, polyacrylate, polynorborene, polyisobutylene, ground synthetic rubber, cross-linked allylstyrene and tertiary butyl copolymers). This does not include polymers derived from biological material or polymers specifically designed to be degradable; or

(iii) Mixtures of these nonbiodegradable materials.

(2) Tests for nonbiodegradable sorbents.

(i) The sorbent material is determined to be nonbiodegradable under ASTM Method G21-70 (1984a)-Standard Practice for Determining Resistance of Synthetic Polymer Materials to Fungi; or

(ii) The sorbent material is determined to be nonbiodegradable under ASTM Method G22-76 (1984b)-Standard Practice for Determining Resistance of Plastics to Bacteria; or

(iii) The sorbent material is determined to be non-biodegradable under OECD test 301B: [CO₂ Evolution (Modified Sturm Test)].

~~(g)~~ (f) ~~Effective November 8, 1985,~~ the The placement of any liquid which is not a hazardous waste in a landfill is prohibited unless the owner or operator of such landfill demonstrates to the Secretary, or the Secretary determines, that:

(1) The only reasonably available alternative to the placement in such landfill is placement in a landfill or unlined surface impoundment, whether or not permitted or operating under interim status, which contains, or may reasonably be anticipated to contain, hazardous waste; and

(2) Placement in such owner or operator's landfill will not present a risk of contamination of any "underground source of drinking water" (as that term is defined in §122.2 of these regulations).

Section 265.441 Assessment of existing drip pad integrity.

(a) For each existing drip pad as defined in §265.440 of this subpart, the owner or operator must evaluate the drip pad and determine that it meets all of the requirements of this subpart, except the requirements for liners and leak detection systems of §265.443(b). No later than the effective date of this rule, the owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by ~~an independent, qualified registered professional engineer~~ a qualified Professional Engineer that attests to the results of the evaluation. The assessment must be reviewed, updated and re-certified annually until all upgrades, repairs, or modifications necessary to achieve compliance with all of the standards of §265.443 ~~of this subpart~~ are complete. The evaluation must document the extent to which the drip pad meets each of the design and operating standards of §265.443 ~~of this subpart~~, except the standards for liners and leak detection systems, specified in §265.443(b) ~~of this subpart~~.

(b) The owner or operator must develop a written plan for upgrading, repairing, and modifying the drip pad to meet the requirements of §265.443(b) ~~of this subpart~~ and submit the plan to the Secretary no later than 2 years before the date that all repairs, upgrades, and

modifications are complete. This written plan must describe all changes to be made to the drip pad in sufficient detail to document compliance with all the requirements of §265.443 of this subpart. The plan must be reviewed and certified by ~~an independent qualified, registered professional engineer~~ a qualified Professional Engineer.

(c) Upon completion of all repairs, and modifications, the owner or operator must submit to the Secretary, the as-built drawings for the drip pad together with a certification by ~~an independent, qualified registered professional engineer~~ a qualified Professional Engineer attesting that the drip pad conforms to the drawings.

Section 265.443 Design and operating requirements.

(a)(4)...

(ii) The owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by ~~an independent, qualified registered professional engineer~~ a qualified Professional Engineer that attests to the results of the evaluation. The assessment must be reviewed, updated and recertified annually. The evaluation must document the extent to which the drip pad meets the design and operating standards of this section, except for ~~subsection (b)~~ paragraph (b) of this section.

...

(g) The drip pad must be evaluated to determine that it meets the requirements of paragraphs (a) through (f) of this section and the owner or operator must obtain a statement from ~~an independent, qualified registered professional engineer~~ a qualified Professional Engineer certifying that the drip pad design meets the requirements of this section.

Section 265.444 Inspections.

(a) During construction or installation, liners and cover systems (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections (e.g., holes, cracks, thin spots, or foreign materials). Immediately after construction or installation, liners must be inspected and certified as meeting the requirements of §265.443 of this subpart by ~~an independent qualified, registered professional engineer~~ a qualified Professional Engineer. The certification must be maintained at the facility as part of the facility operating record. After installation liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters.

Section 265.1100 Applicability.

The requirements of this subpart apply to owners or operators who store or treat hazardous waste in units designed and operated under §265.1101 of this subpart. ~~These provisions will become effective on February 18, 1993, although the owner or operator may notify the Secretary of his intent to be bound by this subpart at an earlier time.~~ The owner or operator is not subject to the definition of land disposal in RCRA section 3004(k) provided that the unit:

Section 265.1101 Design and operating standards.

(c)...

(2) ~~Obtain certification by a qualified registered professional engineer that the containment building design meets the requirements of paragraphs (a) through (c) of this section. For units placed into operation prior to February 18, 1993, this certification must be placed in the facility's operating record (on-site files for generators who are not formally required to have operating records) no later than 60 days after the date of initial operation of the unit. After February 18, 1993, PE certification will be required prior to operation of the unit.~~ Obtain and keep on-site a certification by a qualified Professional Engineer that the containment building design meets the requirements of paragraphs (a), (b), and (c) of this section.

Section 122.14 Contents of Part B: General Requirements.

(a) Part B of the permit application consists of the general information requirements of this section, and the specific information requirements in ~~Section~~ Sections 122.14-122.29 applicable to the facility. The Part B information requirements presented in ~~Section~~ Sections 122.14-122.29 reflect the standards promulgated in Part 264. These information requirements are necessary in order for DNREC to determine compliance with the Part 264 standards. It is recommended that the applicants contact DNREC for information on the format of Part B applications. If owners and operators of HWM facilities can demonstrate that the information prescribed in Part B cannot be provided to the extent required, the Secretary may make allowance for submission of such information on a case-by-case basis. Information required in Part B shall be submitted to the Secretary and signed in accordance with requirements in Section 122.11. Certain technical data, such as design drawings and specifications, and engineering studies shall be certified by a ~~registered professional engineer~~ qualified Professional Engineer. For post-closure permits, only the information specified in Section 122.28 is required in Part B of the permit application.

Section 122.16 Specific Part B information requirements for tank systems. (a) A written assessment that is reviewed and certified by ~~an independent, qualified, registered professional engineer~~ a qualified Professional Engineer as to the structural integrity and suitability for handling hazardous waste of each tank system, as required under Sections ~~Section~~ 264.191 and 264.192;

Section 122.26 Special Part B information requirements for drip pads.

(c)...

(15) A certification signed by ~~an independent qualified, registered professional engineer~~ a qualified Professional Engineer, stating that the drip pad design meets the requirements of paragraphs (a) through (f) of Section 264.573 of these regulations; and

AMENDMENT 4:

Background:

Delaware proposes to make corrections to the Organization of Economic Cooperation and Development (OECD) rule promulgated by USEPA in January 2010. These modifications are found in 75 FR 1236-1262 and RCRA Revision Checklist 222.

Section 262.58 International Agreements.

(a)...

(2) For the purposes of ~~subpart~~ Subpart H of this part, Canada and Mexico are considered OECD member countries only for the purpose of transit.

Section 262.80 Applicability

(a)...

(2) ~~Is~~ Is subject to either the manifesting requirements at ~~part~~ Part 262, ~~subpart~~ Subpart B, the universal waste management standards of ~~part~~ Part 273, or the export requirements in the spent lead-acid battery management standards of ~~part~~ Part 266, subpart G.

262.89 OECD Waste Lists

(b) If a waste is hazardous under paragraph (a) of this section, it is subject to the Amber control procedures, regardless of whether it appears in ~~Appendix 4 of the OECD Decision, as defined in §262.84~~ the OECD Amber List, incorporated by reference in paragraph (d) of this section.

AMENDMENT 5:

Background:

Delaware proposes to make corrections and clarifications as promulgated by USEPA in March 2010 and June 2010. These modifications are found in 75 FR 31716-31717 and RCRA Revision Checklist 223. The SHWMS adopted the majority of these changes in January 2011 and December 2011; however, has since identified a few changes that were not made.

Section 261.5 Special conditions for hazardous waste generated by conditionally exempt small quantity generators.

(e)...

(2) A total of 100 kilograms of any residue or contaminated soil, waste, or other debris resulting from the clean-up of a spill, into or on any land or water, of any acute hazardous wastes listed in §§261.31, or 261.33(e).

[**Comment: Full regulation** means those regulations applicable to generators of ~~greater than 1,000 kg~~ 1,000 kg or greater of ~~non-acutely~~ hazardous waste in a calendar month.]

Section 262.34 Accumulation time

~~(b) A generator who accumulates hazardous waste for more than 90 days is an operator of a storage facility and is subject to the requirements of Part 264 and 265 and the permit requirements of Part 122 unless he has been granted an extension to the 90-day period. Such extension may be granted by DNREC if hazardous wastes must remain on site for longer than 90 days due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to 30 days may be granted at the discretion of the Secretary on a case-by-case basis. A generator of 1,000 kilograms or greater of hazardous waste in a calendar month, or greater than 1 kg of acute hazardous waste listed in §§ 261.31 or 261.33(e) in a calendar month, who accumulates hazardous waste or acute hazardous waste for more than 90 days is an operator of a storage facility and is subject to the requirements of Parts 264, 265, and the permit requirements of Part 122 unless he has been granted an extension to the 90-day period. Such extension may be granted by the Department if hazardous wastes must remain on-site for longer than 90 days due to unforeseen, temporary, and uncontrollable circumstances. An extension of up to 30 days may be granted at the discretion of the Secretary on a case-by-case basis.~~

AMENDMENT 6:

Background:

In December 2011, the SHWMS promulgated regulations delisting saccharin, in accordance with a January 2011 rule adopted by EPA found in 75 FR 78918-78926 and RCRA Summary 225. However, in its December 2011 adoption, the SHWMS only removed one of the two references to saccharin (U202). This proposal is to remove the second reference.

Section 261.33 Discarded commercial chemical products, off-specification species, container residues, and spill residues thereof.

(f)...

U202	¹ 81-07-2	1,2-Benzisothiazol-3(2H)-one, 1,1-dioxide, & salts
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AMENDMENT 7:

Background:

Delaware proposes to make the required revisions to the Export Provisions of the Cathode Ray Tube (CRT) Rule finalized by EPA on June 26, 2014. These modifications are found in 79 FR 36220-36231 and RCRA Revision Checklist 232.

Section 260.10 Definitions

“CRT exporter” means any person in the United States who initiates a transaction to send used CRTs outside the United States or its territories for recycling or reuse, or any

intermediary in the United States arranging for such export.

Section 261.39 Conditional Exclusion from Hazardous Waste for Used, Intact or Broken Cathode Ray Tubes and CRT Glass (CRTs) Managed by CRT Collectors and CRT Processors and Processed CRT Glass Undergoing Recycling.

(a)(5)(i)...

(F) The name and address of the recycler or recyclers and the estimated quantity of used CRTs to be sent to each facility, as well as the names of any alternate recyclers.

(a)(5)...

(iv) ~~Reserved.~~

EPA will provide a complete notification to the receiving country and any transit countries. A notification is complete when EPA receives a notification which EPA determines satisfies the requirements of paragraph (a)(5)(i) of this section. Where a claim of confidentiality is asserted with respect to any notification information required by paragraph (a)(5)(i) of this section, EPA may find the notification not complete until any such claim is resolved in accordance with 40 CFR 260.2.

(v) The export of CRTs is prohibited unless the receiving country consents to the intended export. When the receiving country consents in writing to the receipt of the CRTs, EPA will forward an Acknowledgment of Consent to Export CRTs to the exporter. Where the receiving country objects to receipt of the CRTs or withdraws a prior consent, EPA will notify the exporter in writing. EPA will also notify the exporter of any responses from transit countries.

(vi) When the conditions specified on the original notification change, the exporter must provide EPA and the DNREC Secretary with a written re-notification of the change except for changes to the telephone number in paragraph (a)(5)(i)(A) of this section and decreases in the quantity indicated pursuant to paragraph (a)(5)(i)(C) of this section. The shipment cannot take place until consent of the receiving country to the changes has been obtained (except for changes to information about points of entry and departure and transit countries pursuant to paragraphs (a)(5)(i)(D) and (a)(5)(i)(H) of this section) and the exporter of CRTs receives from EPA a copy of the Acknowledgment of Consent to Export CRTs reflecting the receiving country's consent to the changes.

(vii) A copy of the Acknowledgment of Consent to Export CRTs must accompany the shipment of CRTs. The shipment must conform to the terms of the Acknowledgment.

(viii) If a shipment of CRTs cannot be delivered for any reason to the recycler or the alternate recycler, the exporter of CRTs must re-notify EPA and the DNREC Secretary of a change in the conditions of the original notification to allow shipment to a new recycler in accordance with paragraph (a)(5)(vi) of this section and obtain another Acknowledgment of Consent to Export CRTs.

(ix) Exporters must keep copies of notifications and Acknowledgments of Consent to Export CRTs for a period of three years following receipt of the Acknowledgment.

- (x) CRT exporters must file with EPA, with a copy sent to the DNREC Secretary, no later than March 1 of each year, an annual report summarizing the quantities (in kilograms), frequency of shipment, and ultimate destination(s) (i.e., the facility or facilities where the recycling occurs) of all used CRTs exported during the previous calendar year. Such reports must also include the following:
- (A) The name, EPA ID number (if applicable), and mailing and site address of the exporter;
 - (B) The calendar year covered by the report;
 - (C) A certification signed by the CRT exporter that states:
“I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that, based on my inquiry of those individuals immediately responsible for obtaining this information, 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.”
- (xi) Annual reports must be submitted to the office specified in paragraph (a)(5)(ii) of this section. Exporters must keep copies of each annual report for a period of at least three years from the due date of the report.

Section 261.41 Notification and Recordkeeping for Used, Intact Cathode Ray Tubes (CRTs) Exported for Reuse.

~~(b) Persons who export used, intact CRTs for reuse must send a one-time notification to the Regional Administrator and the DNREC Secretary. The notification must include a statement that the notifier plans to export used, intact CRTs for reuse, the notifier's name, address, and EPA ID number (if applicable) and the name and phone number of a contact person.~~
CRT exporters who export used, intact CRTs for reuse must send a notification to EPA with a copy to the DNREC Secretary. This notification may cover export activities extending over a twelve (12) month or lesser period.

- (1) The notification must be in writing, signed by the exporter, and include the following information:
- (i) Name, mailing address, telephone number, and EPA ID number (if applicable) of the exporter of the used, intact CRTs;
 - (ii) The estimated frequency or rate at which the used, intact CRTs are to be exported for reuse and the period of time over which they are to be exported;
 - (iii) The estimated total quantity of used, intact CRTs specified in kilograms;
 - (iv) All points of entry to and departure from each transit country through which the used, intact CRTs will pass, a description of the approximate length of time the used, intact CRTs will remain in such country, and the nature of their handling while there;
 - (v) A description of the means by which each shipment of the used, intact CRTs will be transported (e.g., mode of transportation vehicle (air, highway, rail, water, etc.), type(s) of container (drums, boxes, tanks, etc.));
 - (vi) The name and address of the ultimate destination facility or facilities where the used, intact CRTs will be reused, refurbished, distributed, or sold

for reuse and the estimated quantity of used, intact CRTs to be sent to each facility, as well as the name of any alternate destination facility or facilities;
(vii) A description of the manner in which the used, intact CRTs will be reused (including reuse after refurbishment) in the foreign country that will be receiving the used, intact CRTs; and

(viii) A certification signed by the CRT exporter that states:

“I certify under penalty of law that the CRTs described in this notice are intact and fully functioning or capable of being functional after refurbishment and that the used CRTs will be reused or refurbished and reused. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.”

(2) Notifications submitted by mail should be sent to the following mailing address: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, (Mail Code 2254A), Environmental Protection Agency, 1200 Pennsylvania Ave. NW., Washington, DC 20460. Hand-delivered notifications should be sent to: Office of Enforcement and Compliance Assurance, Office of Federal Activities, International Compliance Assurance Division, (Mail Code 2254A), Environmental Protection Agency, William Jefferson Clinton Building, Room 6144, 1200 Pennsylvania Ave. NW., Washington, DC 20004. In both cases, the following shall be prominently displayed on the front of the envelope: “Attention: Notification of Intent to Export CRTs. A copy of the notification should be sent to DNREC at the following mailing address: DNREC – Solid and Hazardous Waste Management Section, 89 Kings Highway, Dover, DE 19901.”

~~(c) Persons who export used, intact CRTs for reuse must keep copies of normal business records, such as contracts, demonstrating that each shipment of exported CRTs will be reused. This documentation must be retained for a period of at least three years from the date the CRTs were exported.~~

CRT exporters of used, intact CRTs sent for reuse must keep copies of normal business records, such as contracts, demonstrating that each shipment of exported used, intact CRTs will be reused. This documentation must be retained for a period of at least three years from the date the CRTs were exported. If the documents are written in a language other than English, CRT exporters of used, intact CRTs sent for reuse must provide both the original, non-English version of the normal business records as well as a third-party translation of the normal business records into English within 30 days upon request by EPA or DNREC.

AMENDMENT 8:

Background:

Delaware proposes to make the required revisions to the Definition of Solid Waste (DSW)

Rule finalized by EPA on January 13, 2015. These modifications are found in 80 FR 1694-1814 and RCRA Revision Checklist 233, specifically Checklists 233A, B, and C.

Checklist 233A:

Section 260.31 Standards and criteria for variances from classification as a solid waste.

(c) The Secretary may grant requests for a variance from classifying as a solid waste those hazardous secondary materials that have been partially reclaimed, but must be reclaimed further before recovery is completed, if, after initial reclamation, the resulting material is commodity-like (even though it is not yet a commercial product, and has to be reclaimed further). This determination will be based on the following factors if the partial reclamation has produced a commodity-like material. A determination that a partially-reclaimed material for which the variance is sought is commodity-like will be based on whether the hazardous secondary material is legitimately recycled as specified in § 260.43 of this part and on whether all of the following decision criteria are satisfied:

- ~~(1) The degree of processing the material has undergone and the degree of further processing that is required;~~
- ~~(2) The value of the material after it has been reclaimed;~~
- ~~(3) The degree to which the reclaimed material is like an analogous raw material;~~
- ~~(4) The extent to which an end market for the reclaimed material is guaranteed;~~
- ~~(5) The extent to which the reclaimed material is handled to minimize loss;~~
- ~~(6) Other relevant factors.~~
- (1) Whether the degree of partial reclamation the material has undergone is substantial as demonstrated by using a partial reclamation process other than the process that generated the hazardous waste;
- (2) Whether the partially-reclaimed material has sufficient economic value that it will be purchased for further reclamation;
- (3) Whether the partially-reclaimed material is a viable substitute for a product or intermediate produced from virgin or raw materials which is used in subsequent production steps;
- (4) Whether there is a market for the partially-reclaimed material as demonstrated by known customer(s) who are further reclaiming the material (e.g., records of sales and/or contracts and evidence of subsequent use, such as bills of lading);
- (5) Whether the partially-reclaimed material is handled to minimize loss.
- (6) [Reserved]

Section 260.33 Procedures for variances from classification as solid waste or variances to be classified as a boiler.

(c) In the event of a change in circumstances that affect how a hazardous secondary material meets the relevant criteria contained in §260.31 or §260.32, upon which a variance has been based, the applicant must send a description of the change in circumstances to the Secretary. The Secretary may issue a determination that the hazardous secondary material continues to meet the relevant criteria of the variance or may require the facility to re-apply for the variance.

(d) Variances shall be effective for a fixed term not to exceed ten years. No later than six months prior to the end of this term, facilities must re-apply for a variance. If a facility re-applies for a variance within six months, the facility may continue to operate under an expired variance until receiving a decision on their re-application from the Secretary.
(e) Facilities receiving a variance must provide notification as required by §260.42 of these regulations.

Section 260.42 Notification requirement for hazardous secondary materials.

(a) Facilities managing hazardous secondary materials under an approved variance pursuant to §260.30 must send a notification prior to operating under the regulatory provision and by March 1 of each year thereafter to the Secretary using EPA Form 8700-12 that includes the following information:

- (1) The name, address, and EPA ID number (if applicable) of the facility;
- (2) The name and telephone number of a contact person;
- (3) The NAICS code of the facility;
- (4) The regulation under which the hazardous secondary materials will be managed;
- (5) When the facility began or expects to begin managing the hazardous secondary materials in accordance with the regulation;
- (6) A list of hazardous secondary materials that will be managed according to the regulation (reported as the EPA hazardous waste numbers that would apply if the hazardous secondary materials were managed as hazardous wastes);
- (7) For each hazardous secondary material, whether the hazardous secondary material, or any portion thereof, will be managed in a land-based unit;
- (8) The quantity of each hazardous secondary material to be managed annually; and
- (9) The certification (included in EPA Form 8700-12) signed and dated by an authorized representative of the facility.

(b) If a facility managing hazardous secondary materials has submitted a notification, but then subsequently stops managing hazardous secondary materials in accordance with the regulation(s) listed above, the facility must notify the Secretary within thirty (30) days using EPA Form 8700-12. For purposes of this section, a facility has stopped managing hazardous secondary materials if the facility no longer generates, manages and/or reclaims hazardous secondary materials under the regulation(s) above and does not expect to manage any amount of hazardous secondary materials for at least 1 year.

Checklist 233B:

Section 260.10 Definitions

“Contained” means held in a unit (including a land-based unit as defined in this subpart) that meets the following criteria:

- (1) The unit is in good condition, with no leaks or other continuing or intermittent unpermitted releases of the hazardous secondary materials to the environment, and is designed, as appropriate for the hazardous secondary materials, to prevent releases of hazardous secondary materials to the environment. Unpermitted releases are releases that are not covered by a permit (such as a permit to discharge to water or air) and may include, but are not limited to, releases through surface transport by precipitation

runoff, releases to soil and groundwater, wind-blown dust, fugitive air emissions, and catastrophic unit failures; and

(2) The unit is properly labeled or otherwise has a system (such as a log) to immediately identify the hazardous secondary materials in the unit; and

(3) The unit holds hazardous secondary materials that are compatible with other hazardous secondary materials placed in the unit and is compatible with the materials used to construct the unit and addresses any potential risks of fires or explosions.

(4) Hazardous secondary materials in units that meet the applicable requirements of Parts 264 or 265 are presumptively contained.

“Hazardous secondary material” means a secondary material (e.g., spent material, by-product, or sludge) that, when discarded, would be identified as hazardous waste under Part 261 of these regulations.

“Land-based unit” means an area where hazardous secondary materials are placed in or on the land before recycling. This definition does not include land-based production units.

Section 260.43 Legitimate recycling of hazardous secondary materials.

(a) Recycling of hazardous secondary materials for the purpose of the exclusions or exemptions from the hazardous waste regulations must be legitimate. Hazardous secondary material that is not legitimately recycled is discarded material and is a solid waste. In determining if their recycling is legitimate, persons must address all the requirements of this paragraph.

(1) Legitimate recycling must involve a hazardous secondary material that provides a useful contribution to the recycling process or to a product or intermediate of the recycling process. The hazardous secondary material provides a useful contribution if it:

- (i) Contributes valuable ingredients to a product or intermediate; or
- (ii) Replaces a catalyst or carrier in the recycling process; or
- (iii) Is the source of a valuable constituent recovered in the recycling process;

or

- (iv) Is recovered or regenerated by the recycling process; or
- (v) Is used as an effective substitute for a commercial product.

(2) The recycling process must produce a valuable product or intermediate. The product or intermediate is valuable if it is:

- (i) Sold to a third party; or
- (ii) Used by the recycler or the generator as an effective substitute for a commercial product or as an ingredient or intermediate in an industrial process.

(3) The generator and the recycler must manage the hazardous secondary material as a valuable commodity when it is under their control. Where there is an analogous raw material, the hazardous secondary material must be managed, at a minimum, in a manner consistent with the management of the raw material or in an equally

protective manner. Where there is no analogous raw material, the hazardous secondary material must be contained. Hazardous secondary materials that are released to the environment and are not recovered immediately are discarded.
(4) The product of the recycling process must be comparable to a legitimate product or intermediate:

(i) Where there is an analogous product or intermediate, the product of the recycling process is comparable to a legitimate product or intermediate if:

(A) The product of the recycling process does not exhibit a hazardous characteristic (as defined in Part 261 Subpart C) that analogous products do not exhibit, and

(B) The concentrations of any hazardous constituents found in Appendix VIII of Part 261 of these regulations that are in the product or intermediate are at levels that are comparable to or lower than those found in analogous products or at levels that meet widely-recognized commodity standards and specifications, in the case where the commodity standards and specifications include levels that specifically address those hazardous constituents.

(ii) Where there is no analogous product, the product of the recycling process is comparable to a legitimate product or intermediate if:

(A) The product of the recycling process is a commodity that meets widely recognized commodity standards and specifications (e.g., commodity specification grades for common metals), or

(B) The hazardous secondary materials being recycled are returned to the original process or processes from which they were generated to be reused (e.g., closed loop recycling).

(iii) If the product of the recycling process has levels of hazardous constituents that are not comparable to or unable to be compared to a legitimate product or intermediate per paragraph (a)(4)(i) or (ii) of this section, the recycling still may be shown to be legitimate, if it meets the following specified requirements. The person performing the recycling must conduct the necessary assessment and prepare documentation showing why the recycling is, in fact, still legitimate. The recycling can be shown to be legitimate based on lack of exposure from toxics in the product, lack of the bioavailability of the toxics in the product, or other relevant considerations which show that the recycled product does not contain levels of hazardous constituents that pose a significant human health or environmental risk. The documentation must include a certification statement that the recycling is legitimate and must be maintained on-site for three years after the recycling operation has ceased. The person performing the recycling must notify the DNREC Secretary of this activity using EPA Form 8700-12.

(b) [Reserved]

(c) [Reserved]

Section 261.2 Definition of solid waste.

(b)...

- (3) Accumulated, stored, or treated (but not recycled) before or in lieu of being abandoned by being disposed of, burned, or incinerated; or
(4) Sham recycled, as explained in paragraph (g) of this section.

Section 261.2 Definition of solid waste.

(g) Sham recycling. A hazardous secondary material found to be sham recycled is considered discarded and a solid waste. Sham recycling is recycling that is not legitimate recycling as defined in §260.43.

Checklist 233C:

Section 261.1 Purpose and scope.

(c)...

(8) A material is **accumulated speculatively** if it is accumulated before being recycled. A material is not accumulated speculatively, however, if the person accumulating it can show that material is potentially recyclable and has a feasible means of being recycled; and that - during the calendar year (commencing on January 1) - the amount of material that is recycled, or transferred to a different site for recycling, equals at least 75 percent by weight or volume of the amount of that material accumulated at the beginning of the period. Materials must be placed in a storage unit with a label indicating the first date that the material began to be accumulated. If placing a label on the storage unit is not practicable, the accumulation period must be documented through an inventory log or other appropriate method. In calculating the percentage of turnover, the 75 percent requirement is to be applied to each material of the same type (e.g., slags from a single smelting process) that is recycled in the same way (i.e., from which the same material is recovered or that is used in the same way). Materials accumulating in units that would be exempt from regulation under §261.4(c) are not to be included in making the calculation. (Materials that are already defined as solid wastes also are not to be included in making the calculation.) Materials are no longer in this category once they are removed from accumulation for recycling, however.

AMENDMENT 9

Background:

Delaware proposes to remove all references to the comparable fuels rule and gasification rule due to the fact that EPA vacated those rules on April 8, 2015. These modifications are found in 80 FR 18777-18780 and RCRA Revision Checklist 234.

Section 261.4 Exclusions

(a)(12)...

(i) Oil-bearing hazardous secondary materials (i.e., sludges, byproducts, or spent materials) that are generated at a petroleum refinery (SIC code 2911) and are inserted into the petroleum refining process (SIC code 2911 - including, but not limited to,

distillation, catalytic cracking, fractionation, or thermal cracking units (i.e., cokers)) unless the material is placed on the land, or speculatively accumulated before being so recycled. Materials inserted into thermal cracking units are excluded under this paragraph, provided that the coke product also does not exhibit a characteristic of hazardous waste. Oil-bearing hazardous secondary materials may be inserted into the same petroleum refinery where they are generated, or sent directly to another petroleum refinery, and still be excluded under this provision. Except as provided in paragraph (a)(12)(ii) of this section, oil-bearing hazardous secondary materials generated elsewhere in the petroleum industry (i.e., from sources other than petroleum refineries) are not excluded under this section. Residuals generated from processing or recycling materials excluded under this paragraph (a)(12)(i), where such materials as generated would have otherwise met a listing under Part 261, Subpart D, are designated as F037 listed wastes when disposed of or intended for disposal.

Section 261.4 Exclusions

(a)...

(16) ~~Comparable fuels or comparable syngas fuels that meet the requirements of §261.38. [Reserved]~~

Section 261.38 ~~Exclusion of comparable fuel and syngas fuel. [Reserved]~~

~~(a) Specifications for excluded fuels. Wastes that meet the specifications for comparable fuel or syngas fuel under paragraphs (a)(1) or (a)(2) of this section, respectively, and the other requirements of this section, are not solid wastes.~~

~~(1) Comparable fuel specifications.—~~

~~(i) Physical specifications.—~~

~~(A) Heating value. The heating value must exceed 5,000 Btu/lbs. (11,500 J/g).~~

~~(B) Viscosity. The viscosity must not exceed: 50 cS, as fired.~~

~~(ii) Constituent specifications. For compounds listed in Table 1 to this section, the specification levels and, where non-detect is the specification, minimum required detection limits are: (see Table 1 of this section).~~

~~(2) Synthesis gas fuel specifications.— Synthesis gas fuel (i.e., syngas fuel) that is generated from hazardous waste must:~~

~~(i) Have a minimum Btu value of 100 Btu/Scf;~~

~~(ii) Contain less than 1 ppmv of total halogen;~~

~~(iii) Contain less than 300 ppmv of total nitrogen other than diatomic nitrogen (N₂);~~

~~(iv) Contain less than 200 ppmv of hydrogen sulfide; and~~

~~(v) Contain less than 1 ppmv of each hazardous constituent in the target list of appendix VIII constituents of this part.~~

~~(3) Blending to meet the specifications.~~

~~(i) Hazardous waste shall not be blended to meet the comparable fuel specification under paragraph (a)(1) of this section, except as provided by paragraph (a)(3)(ii) of this section:~~

~~(ii) Blending to meet the viscosity specification. A hazardous waste blended to meet the viscosity specification for comparable fuel shall:~~

~~(A) As generated and prior to any blending, manipulation, or processing, meet the constituent and heating value specifications of paragraphs (a)(1)(i)(A) and (a)(1)(ii) of this section;~~

~~(B) Be blended at a facility that is subject to the applicable requirements of parts 264, 265, or § 262.34 of these regulations; and~~

~~(C) Not violate the dilution prohibition of paragraph (a)(6) of this section.~~

~~(4) Treatment to meet the comparable fuel specifications.~~

~~(i) A hazardous waste may be treated to meet the specifications for comparable fuel set forth in paragraph (a)(1) of this section provided the treatment:~~

~~(A) Destroys or removes the constituents listed in the specification or raises the heating value by removing or destroying hazardous constituents or materials;~~

~~(B) Is performed at a facility that is subject to the applicable requirements of parts 264, 265, or § 262.34 of these regulations; and~~

~~(C) Does not violate the dilution prohibition of paragraph (a)(6) of this section.~~

~~(ii) Residuals resulting from the treatment of a hazardous waste listed in subpart D of this part to generate a comparable fuel remain a hazardous waste.~~

~~(5) Generation of a syngas fuel.~~

~~(i) A syngas fuel can be generated from the processing of hazardous wastes to meet the exclusion specifications of paragraph (a)(2) of this section provided the processing:~~

~~(A) Destroys or removes the constituents listed in the specification or raises the heating value by removing or destroying constituents or materials;~~

~~(B) Is performed at a facility that is subject to the applicable requirements of parts 264, 265, or § 262.34 of these regulations or is an exempt recycling unit pursuant to § 261.6(c); and~~

~~(C) Does not violate the dilution prohibition of paragraph (a)(6) of this section.~~

~~(ii) Residuals resulting from the treatment of a hazardous waste listed in subpart D of this part to generate a syngas fuel remain a hazardous waste.~~

~~(6) Dilution prohibition. No generator, transporter, handler, or owner or operator of a treatment, storage, or disposal facility shall in any way dilute a hazardous waste to meet the specifications of paragraphs (a)(1)(i)(A) or (a)(1)(ii) of this section for comparable fuel, or paragraph (a)(2) of this section for syngas.~~

~~(b) Implementation.—~~

~~(1) General.—~~

- (i) Wastes that meet the specifications provided by paragraph (a) of this section for comparable fuel or syngas fuel are excluded from the definition of solid waste provided that the conditions under this section are met. For purposes of this section, such materials are called excluded fuel; the person claiming and qualifying for the exclusion is called the excluded fuel generator and the person burning the excluded fuel is called the excluded fuel burner.
- (ii) The person who generates the excluded fuel must claim the exclusion by complying with the conditions of this section and keeping records necessary to document compliance with those conditions.

(2) Notices:

- (i) Notices to State RCRA and CAA Directors in authorized States or regional RCRA and CAA Directors in unauthorized States:

(A) The generator must submit a one-time notice, except as provided by paragraph (b)(2)(i)(C) of this section, to the Regional or State RCRA and CAA Directors, in whose jurisdiction the exclusion is being claimed and where the excluded fuel will be burned, certifying compliance with the conditions of the exclusion and providing the following documentation:

- (1) The name, address, and RCRA ID number of the person/facility claiming the exclusion;
 - (2) The applicable EPA Hazardous Waste Code(s) that would otherwise apply to the excluded fuel;
 - (3) The name and address of the units meeting the requirements of paragraphs (b)(3) and (c) of this section, that will burn the excluded fuel;
 - (4) An estimate of the average and maximum monthly and annual quantity of material for which an exclusion would be claimed, except as provided by paragraph (b)(2)(i)(C) of this section; and
 - (5) The following statement, which shall be signed and submitted by the person claiming the exclusion or his authorized representative: Under penalty of criminal and civil prosecution for making or submitting false statements, representations, or omissions, I certify that the requirements of DRGHW §261.38 have been met for all comparable fuels identified in this notification. Copies of the records and information required at DRGHW §261.38(b)(8) are available at the generator's facility. Based on my inquiry of the individuals immediately responsible for obtaining the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
- (B) If there is a substantive change in the information provided in the notice required under this paragraph, the generator must submit a revised notification.

~~(C) Excluded fuel generators must include an estimate of the average and maximum monthly and annual quantity of material for which an exclusion would be claimed only in notices submitted after December 19, 2008 for newly excluded fuel or for revised notices as required by paragraph (b)(2)(i)(B) of this section.~~

~~(ii) Public notice. Prior to burning an excluded fuel, the burner must publish in a major newspaper of general circulation local to the site where the fuel will be burned, a notice entitled “Notification of Burning a Fuel Excluded Under the Resource Conservation and Recovery Act” and containing the following information:~~

- ~~(A) Name, address, and RCRA ID number of the generating facility(ies);~~
- ~~(B) Name and address of the burner and identification of the unit(s) that will burn the excluded fuel;~~
- ~~(C) A brief, general description of the manufacturing, treatment, or other process generating the excluded fuel;~~
- ~~(D) An estimate of the average and maximum monthly and annual quantity of the excluded fuel to be burned; and~~
- ~~(E) Name and mailing address of the Regional or State Directors to whom the generator submitted a claim for the exclusion.~~

~~(3) Burning. The exclusion applies only if the fuel is burned in the following units that also shall be subject to Federal/State/local air emission requirements, including all applicable requirements implementing section 112 of the Clean Air Act and 7 DE Admin. Code 1100, Air Quality Management Section:~~

- ~~(i) Industrial furnaces as defined in §260.10 of these regulations;~~
- ~~(ii) Boilers, as defined in §260.10 of these regulations, that are further defined as follows:~~

- ~~(A) Industrial boilers located on the site of a facility engaged in a manufacturing process where substances are transformed into new products, including the component parts of products, by mechanical or chemical processes; or~~
- ~~(B) Utility boilers used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale;~~

~~(iii) Hazardous waste incinerators subject to regulation under subpart O of parts 264 or 265 of these regulations and applicable CAA MACT and 7 DE Admin. Code 1100, Air Quality Management Section standards.~~

~~(iv) Gas turbines used to produce electric power, steam, heated or cooled air, or other gases or fluids for sale.~~

~~(4) Fuel analysis plan for generators.~~

~~The generator of an excluded fuel shall develop and follow a written fuel analysis plan which describes the procedures for sampling and analysis of the material to be excluded. The plan shall be followed and retained at the site of the generator claiming the exclusion.~~

- ~~(i) At a minimum, the plan must specify:~~

- ~~(A) The parameters for which each excluded fuel will be analyzed and the rationale for the selection of those parameters;~~

- ~~(B) The test methods which will be used to test for these parameters;~~
- ~~(C) The sampling method which will be used to obtain a representative sample of the excluded fuel to be analyzed;~~
- ~~(D) The frequency with which the initial analysis of the excluded fuel will be reviewed or repeated to ensure that the analysis is accurate and up to date; and~~
- ~~(E) If process knowledge is used in the determination, any information prepared by the generator in making such determination.~~
- (ii) For each analysis, the generator shall document the following:
 - ~~(A) The dates and times that samples were obtained, and the dates the samples were analyzed;~~
 - ~~(B) The names and qualifications of the person(s) who obtained the samples;~~
 - ~~(C) A description of the temporal and spatial locations of the samples;~~
 - ~~(D) The name and address of the laboratory facility at which analyses of the samples were performed;~~
 - ~~(E) A description of the analytical methods used, including any clean-up and sample preparation methods;~~
 - ~~(F) All quantitation limits achieved and all other quality control results for the analysis (including method blanks, duplicate analyses, matrix spikes, etc.), laboratory quality assurance data, and the description of any deviations from analytical methods written in the plan or from any other activity written in the plan which occurred;~~
 - ~~(G) All laboratory results demonstrating whether the exclusion specifications have been met; and~~
 - ~~(H) All laboratory documentation that support the analytical results, unless a contract between the claimant and the laboratory provides for the documentation to be maintained by the laboratory for the period specified in paragraph (b)(9) of this section and also provides for the availability of the documentation to the claimant upon request.~~
- ~~(iii) Syngas fuel generators shall submit for approval, prior to performing sampling, analysis, or any management of an excluded syngas fuel, a fuel analysis plan containing the elements of paragraph (b)(4)(i) of this section to the appropriate regulatory authority. The approval of fuel analysis plans must be stated in writing and received by the facility prior to sampling and analysis to demonstrate the exclusion of a syngas. The approval of the fuel analysis plan may contain such provisions and conditions as the regulatory authority deems appropriate.~~
- (5) Excluded fuel sampling and analysis.
 - (i) General. For wastes for which an exclusion is claimed under the specifications provided by paragraphs (a)(1) or (a)(2) of this section, the generator of the waste must test for all the constituents in appendix VIII to this part, except those that the generator determines, based on testing or knowledge, should not be present in the fuel. The generator is required to document the basis of each determination that a constituent with an applicable specification should not be present. The generator may not determine that any

of the following categories of constituents with a specification in Table 1 to this section should not be present:

- (A) A constituent that triggered the toxicity characteristic for the constituents that were the basis for listing the hazardous secondary material as a hazardous waste, or constituents for which there is a treatment standard for the waste code in DRGHW §268.40;
- (B) A constituent detected in previous analysis of the waste;
- (C) Constituents introduced into the process that generates the waste;
- or
- (D) Constituents that are byproducts or side reactions to the process that generates the waste.

Note to paragraph (b)(5): Any claim under this section must be valid and accurate for all hazardous constituents; a determination not to test for a hazardous constituent will not shield a generator from liability should that constituent later be found in the excluded fuel above the exclusion specifications.

(ii) Use of process knowledge. For each waste for which the comparable fuel or syngas exclusion is claimed where the generator of the excluded fuel is not the original generator of the hazardous waste, the generator of the excluded fuel may not use process knowledge pursuant to paragraph (b)(5)(i) of this section and must test to determine that all of the constituent specifications of paragraphs (a)(1) and (a)(2) of this section, as applicable, have been met.

(iii) The excluded fuel generator may use any reliable analytical method to demonstrate that no constituent of concern is present at concentrations above the specification levels. It is the responsibility of the generator to ensure that the sampling and analysis are unbiased, precise, and representative of the excluded fuel. For the fuel to be eligible for exclusion, a generator must demonstrate that:

- (A) The 95% upper confidence limit of the mean concentration for each constituent of concern is not above the specification level; and
- (B) The analyses could have detected the presence of the constituent at or below the specification level.

(iv) Nothing in this paragraph preempts, overrides or otherwise negates the provision in §262.11 of these regulations, which requires any person who generates a solid waste to determine if that waste is a hazardous waste.

(v) In an enforcement action, the burden of proof to establish conformance with the exclusion specification shall be on the generator claiming the exclusion.

(vi) The generator must conduct sampling and analysis in accordance with the fuel analysis plan developed under paragraph (b)(4) of this section.

(vii) Viscosity condition for comparable fuel.

- (A) Excluded comparable fuel that has not been blended to meet the kinematic viscosity specification shall be analyzed as generated.
- (B) If hazardous waste is blended to meet the kinematic viscosity specification for comparable fuel, the generator shall:

- ~~(1) Analyze the hazardous waste as generated to ensure that it meets the constituent and heating value specifications of paragraph (a)(1) of this section; and~~
- ~~(2) After blending, analyze the fuel again to ensure that the blended fuel meets all comparable fuel specifications.~~
- ~~(viii) Excluded fuel must be retested, at a minimum, annually and must be retested after a process change that could change its chemical or physical properties in a manner that may affect conformance with the specifications.~~
- ~~(6) (Reserved)~~
- ~~(7) Speculative accumulation. Excluded fuel must not be accumulated speculatively, as defined in §261.1(e)(8).~~
- ~~(8) Operating record. The generator must maintain an operating record on site containing the following information:~~
 - ~~(i) All information required to be submitted to the implementing authority as part of the notification of the claim:~~
 - ~~(A) The owner/operator name, address, and RCRA ID number of the person claiming the exclusion;~~
 - ~~(B) For each excluded fuel, the EPA Hazardous Waste Codes that would be applicable if the material were discarded; and~~
 - ~~(C) The certification signed by the person claiming the exclusion or his authorized representative.~~
 - ~~(ii) A brief description of the process that generated the excluded fuel. If the comparable fuel generator is not the generator of the original hazardous waste, provide a brief description of the process that generated the hazardous waste;~~
 - ~~(iii) The monthly and annual quantities of each fuel claimed to be excluded;~~
 - ~~(iv) Documentation for any claim that a constituent is not present in the excluded fuel as required under paragraph (b)(5)(i) of this section;~~
 - ~~(v) The results of all analyses and all detection limits achieved as required under paragraph (b)(4) of this section;~~
 - ~~(vi) If the comparable fuel was generated through treatment or blending, documentation of compliance with the applicable provisions of paragraphs (a)(3) and (a)(4) of this section;~~
 - ~~(vii) If the excluded fuel is to be shipped off site, a certification from the burner as required under paragraph (b)(10) of this section;~~
 - ~~(viii) The fuel analysis plan and documentation of all sampling and analysis results as required by paragraph (b)(4) of this section; and~~
 - ~~(ix) If the generator ships excluded fuel off site for burning, the generator must retain for each shipment the following information on site:~~
 - ~~(A) The name and address of the facility receiving the excluded fuel for burning;~~
 - ~~(B) The quantity of excluded fuel shipped and delivered;~~
 - ~~(C) The date of shipment or delivery;~~
 - ~~(D) A cross reference to the record of excluded fuel analysis or other information used to make the determination that the excluded fuel meets the specifications as required under paragraph (b)(4) of this section; and~~

~~(E) A one-time certification by the burner as required under paragraph (b)(10) of this section.~~

~~(9) Records retention. Records must be maintained for a period of three years.~~

~~(10) Burner certification to the generator. Prior to submitting a notification to the State and Regional Directors, a generator of excluded fuel who intends to ship the excluded fuel off-site for burning must obtain a onetime written, signed statement from the burner:~~

~~(i) Certifying that the excluded fuel will only be burned in an industrial furnace, industrial boiler, utility boiler, or hazardous waste incinerator, as required under paragraph (b)(3) of this section;~~

~~(ii) Identifying the name and address of the facility that will burn the excluded fuel; and~~

~~(iii) Certifying that the State in which the burner is located is authorized to exclude wastes as excluded fuel under the provisions of this section.~~

~~(11) Ineligible waste codes. Wastes that are listed as hazardous waste because of the presence of dioxins or furans, as set out in appendix VII of this part, are not eligible for these exclusions, and any fuel produced from or otherwise containing these wastes remains a hazardous waste subject to the full RCRA hazardous waste management requirements.~~

~~(12) Regulatory status of boiler residues. Burning excluded fuel that was otherwise a hazardous waste listed under §§261.31 through 261.33 does not subject boiler residues, including bottom ash and emission control residues, to regulation as derived from hazardous wastes.~~

~~(13) Residues in containers and tank systems upon cessation of operations.~~

~~(i) Liquid and accumulated solid residues that remain in a container or tank system for more than 90 days after the container or tank system ceases to be operated for storage or transport of excluded fuel product are subject to regulation under parts 262 through 265, 268, 122, and 124 of these regulations.~~

~~(ii) Liquid and accumulated solid residues that are removed from a container or tank system after the container or tank system ceases to be operated for storage or transport of excluded fuel product are solid wastes subject to regulation as hazardous waste if the waste exhibits a characteristic of hazardous waste under §§261.21 through 261.24 or if the fuel were otherwise a hazardous waste listed under §§261.31 through 261.33 when the exclusion was claimed.~~

~~(iii) Liquid and accumulated solid residues that are removed from a container or tank system and which do not meet the specifications for exclusion under paragraphs (a)(1) or (a)(2) of this section are solid wastes subject to regulation as hazardous waste if:~~

~~(A) The waste exhibits a characteristic of hazardous waste under §§261.21 through 261.24; or~~

~~(B) The fuel were otherwise a hazardous waste listed under §§261.31 through 261.33. The hazardous waste code for the listed waste applies to these liquid and accumulated solid residues.~~

- ~~(14) Waiver of RCRA Closure Requirements. Interim status and permitted storage and combustion units, and generator storage units exempt from the permit requirements under §262.34 of these regulations, are not subject to the closure requirements of DRGHW § Parts 264, and 265 provided that the storage and combustion unit has been used to manage only hazardous waste that is subsequently excluded under the conditions of this section, and that afterward will be used only to manage fuel excluded under this section.~~
- ~~(15) Spills and leaks.~~
- ~~(i) Excluded fuel that is spilled or leaked and that therefore no longer meets the conditions of the exclusion is discarded and must be managed as a hazardous waste if it exhibits a characteristic of hazardous waste under §§261.21 through 261.24 or if the fuel were otherwise a hazardous waste listed in §§261.31 through 261.33.~~
 - ~~(ii) For excluded fuel that would have otherwise been a hazardous waste listed in §§261.31 through 261.33 and which is spilled or leaked, the hazardous waste code for the listed waste applies to the spilled or leaked material.~~
- ~~(16) Nothing in this section preempts, overrides, or otherwise negates the provisions in CERCLA Section 103 and 7 Del.C. §6028 (see 7 DE Admin. Code 1203, Reporting of a Discharge of a Pollutant or Air Contaminant), which establish reporting obligations for releases of hazardous substances, or the Department of Transportation requirements for hazardous materials in 49 CFR parts 171 through 180.~~
- ~~(c) Failure to comply with the conditions of the exclusion. An excluded fuel loses its exclusion if any person managing the fuel fails to comply with the conditions of the exclusion under this section, and the material must be managed as hazardous waste from the point of generation. In such situations, EPA or the Department may take enforcement action under RCRA section 3008(a) or 7 Del.C. Chapters 60 and/or 63.~~

This proposal also deletes Table 1 in 261.38.

Table 1 to § 261.35—Detection and Detection Limit Values for Comparable Fuel Specification

Chemical name	CAS No.	Concentration Limit (mg/kg at 10,000 Btu/lb)	Minimum Required Detection Limit (mg/kg)
Total Nitrogen as N.....	NA	4900	
Total Halogens as Cl.....	NA	540	
Total Organic Halogens as Cl.....	NA	(*)	
Polychlorinated biphenyls, total [Aroclors, total]	1336-36-3	ND	1.4
Cyanide, total.....	57-12-5	ND	1
Metals:			
Antimony, total.....	7440-36-0	12	
Arsenic, total.....	7440-38-2	0.23	
Barium, total.....	7440-39-3	23	
Beryllium, total.....	7440-41-7	1.2	
Cadmium, total.....	7440-43-8	1.2	
Chromium, total.....	7440-47-3	2.3	
Cobalt.....	7440-48-4	4.8	
Lead, total.....	7439-92-1	31	
Manganese.....	7439-96-5	1.2	
Mercury, total.....	7439-97-6	0.25	
Nickel, total.....	7440-02-0	58	
Selenium, total.....	7782-49-2	0.23	
Silver, total.....	7440-22-4	2.3	
Thallium, total.....	7440-28-0	23	
Hydrocarbons:			
Benzo(a)anthracene.....	56-55-3	2400	
Benzene.....	71-43-2	4100	
Benzo(b)fluoranthene.....	206-99-2	2400	
Benzo(k)fluoranthene.....	207-08-9	2400	
Benzo(a)pyrene.....	50-32-8	2400	
Chrysene.....	218-01-9	2400	
Dibenzo(a,h)anthracene.....	52-70-3	2400	
7,12-Dimethylbenz(a)anthracene.....	57-97-6	2400	
Fluoranthene.....	206-44-0	2400	
Indeno(1,2,3-cd)pyrene.....	193-39-5	2400	
3-Methylcholanthrene.....	58-49-5	2400	
Naphthalene.....	91-20-3	3200	
Toluene.....	108-88-3	35000	
Oxygenates:			
Acetophenone.....	98-86-1	2400	
Acrolein.....	107-02-8	30	
Allyl alcohol.....	107-18-6	30	
Bis(2-ethylhexyl)phthalate [Di-2-ethylhexyl phthalate]	117-81-7	2400	
Butyl benzyl phthalate.....	85-68-7	2400	
o-Cresol [2-Methyl phenol].....	95-48-7	2400	
m-Cresol [3-Methyl phenol].....	108-39-4	2400	
p-Cresol [4-Methyl phenol].....	106-44-5	2400	
Di-n-butyl phthalate.....	84-74-2	2400	

Diethyl phthalate.....	84-88-2	2400	.....
2,4-Dimethylphenol.....	105-67-8	2400	.....
Dimethyl phthalate.....	131-11-3	2400	.....
Di-n-octyl phthalate.....	117-84-0	2400	.....
Endothall.....	145-73-3	100	.....
Ethyl methacrylate.....	97-83-2	39	.....
2-Ethoxyethanol [Ethylene glycol monoethyl ether]	110-80-5	100	.....
Isobutyl alcohol.....	78-83-1	39	.....
Isosafrole.....	120-58-1	2400	.....
Methyl ethyl ketone [2-Butanone].....	78-93-3	39	.....
Methyl methacrylate.....	80-62-6	39	.....
1,4-Naphthoquinone.....	130-15-4	2400	.....
Phenol.....	108-95-2	2400	.....
Propargyl alcohol [2-Propyn-1-ol].....	107-19-7	30	.....
Safrole.....	94-59-7	2400	.....
Sulfonated Organics:			
Carbon disulfide.....	75-16-0	ND	39
Disulfoton.....	298-04-4	ND	2400
Ethyl methanesulfonate.....	62-50-0	ND	2400
Methyl methanesulfonate.....	66-27-3	ND	2400
Phorate.....	298-02-2	ND	2400
1,3-Propane sultone.....	1120-71-4	ND	100
Tetraethylthiopyrophosphate [Sulfotapp].....	3689-24-6	ND	2400
Thiophenol [Benzenethiol].....	108-88-5	ND	30
O,O,O-Triethyl phosphorothioate.....	126-68-1	ND	2400
Nitrogenated Organics:			
Acetonitrile [Methyl cyanide].....	75-05-8	ND	39
2-Acetylaminofluorene [2-AAF].....	53-86-3	ND	2400
Acrylonitrile.....	107-13-1	ND	39
4-Aminobiphenyl.....	92-87-1	ND	2400
4-Aminopyridine.....	504-24-5	ND	100
Aniline.....	62-53-3	ND	2400
Benzidine.....	92-87-5	ND	2400
Dibenz[a,j]acridine.....	224-42-0	ND	2400
O,O-Diethyl O-pyrazinyl phosphorothioate [Thionazin]	297-97-2	ND	2400
Dimethoate.....	60-51-5	ND	2400
p-(Dimethylamino) azobenzene [4-Dimethylaminoazobenzene]	60-11-7	ND	2400
3,3[prime]-Dimethylbenzidine.....	119-93-7	ND	2400
α,α-Dimethylphenethylamine.....	122-09-8	ND	2400
3,3[prime]-Dimethoxybenzidine.....	119-90-4	ND	100
1,3-Dinitrobenzene [m-Dinitrobenzene].....	99-85-0	ND	2400
4,6-Dinitro-o-cresol.....	534-52-1	ND	2400
2,4-Dinitrophenol.....	51-28-5	ND	2400
2,4-Dinitrotoluene.....	121-14-2	ND	2400
2,6-Dinitrotoluene.....	806-20-2	ND	2400
Dinoseb [2-sec-Butyl-4,6-dinitrophenol].....	88-85-7	ND	2400
Diphenylamine.....	122-39-4	ND	2400
Ethyl carbamate [Urethane].....	51-79-6	ND	100
Ethylenethiourea (2-Imidazolidinethione).....	96-45-7	ND	110

Famphur.....	62-85-7	ND	2400
Methacrylonitrile.....	126-98-7	ND	38
Methapyridine.....	91-80-5	ND	2400
Methomyl.....	16762-77-5	ND	57
2-Methylacetonitrile, [Acetone cyanohydrin]....	75-86-5	ND	100
Methyl parathion.....	298-00-0	ND	2400
MING (N-Methyl-N-nitroso-N[prime]-nitroguanidine)	70-25-7	ND	110
1-Naphthylamine, (α-Naphthylamine).....	134-32-7	ND	2400
2-Naphthylamine, (β-Naphthylamine).....	91-59-8	ND	2400
Nicotine.....	64-11-5	ND	100
4-Nitroaniline, [p-Nitroaniline].....	100-01-6	ND	2400
Nitrobenzene.....	98-08-3	ND	2400
p-Nitrophenol, [p-Nitrophenol].....	100-02-7	ND	2400
5-Nitro-o-toluidine.....	99-55-8	ND	2400
N-Nitrosodi-n-butylamine.....	924-16-3	ND	2400
N-Nitrosodiethylamine.....	55-18-5	ND	2400
N-Nitrosodiphenylamine, [Diphenylnitrosamine]..	86-30-6	ND	2400
N-Nitroso-N-methylethylamine.....	10595-95-8	ND	2400
N-Nitrosomorpholine.....	59-89-2	ND	2400
N-Nitrosopiperidine.....	100-75-4	ND	2400
N-Nitrosopyrrolidine.....	930-55-2	ND	2400
2-Nitropropane.....	79-46-9	ND	2400
Parathion.....	56-38-2	ND	2400
Phenacetin.....	62-44-2	ND	2400
1,4-Phenylene diamine, [p-Phenylenediamine]....	106-50-3	ND	2400
N-Phenylthiourea.....	103-85-6	ND	57
2-Picoline [alpha-Picoline].....	109-08-8	ND	2400
Propylthiouracil, [6-Propyl-2-thiouracil].....	51-52-5	ND	100
Pyridine.....	110-26-1	ND	2400
Strychnine.....	57-24-9	ND	100
Thioacetamide.....	62-55-5	ND	57
Thiofanox.....	39196-18-4	ND	100
Thiourea.....	62-56-0	ND	57
Toluene-2,4-diamine [2,4-Diaminotoluene].....	95-80-7	ND	57
Toluene-2,6-diamine [2,6-Diaminotoluene].....	823-40-5	ND	57
o-Toluidine.....	95-53-4	ND	2400
p-Toluidine.....	106-49-0	ND	100
1,3,5-Trinitrobenzene, [sym-Trinitrobenzene]....	99-35-4	ND	2400
Halogenated Organics:			
Allyl chloride.....	107-05-1	ND	38
Aramite.....	140-67-8	ND	2400
Benzal chloride [Dichloromethyl benzene].....	98-87-3	ND	100
Benzyl chloride.....	100-44-77	ND	100
bis(2-Chloroethyl)ether [Dichloroethyl ether]...	111-44-4	ND	2400
Bromoform [Tribromomethane].....	75-25-2	ND	38
Bromomethane [Methyl bromide].....	74-83-9	ND	38
4-Bromophenyl phenyl ether [p-Bromo diphenyl ether]	101-66-3	ND	2400
Carbon tetrachloride.....	56-23-5	ND	38
Chlordane.....	57-74-9	ND	14

p-Chloroaniline.....	108-47-8	ND	2400
Chlorobenzene.....	108-90-7	ND	39
Chlorobenzilate.....	510-15-8	ND	2400
p-Chloro-m-cresol.....	58-50-7	ND	2400
2-Chloroethyl vinyl ether.....	110-75-8	ND	39
Chloroform.....	67-68-3	ND	39
Chloromethane [Methyl chloride].....	74-87-3	ND	39
2-Chloronaphthalene [beta-Chloronaphthalene]...	91-58-7	ND	2400
2-Chlorophenol [o-Chlorophenol].....	95-57-8	ND	2400
Chloroprene [2-Chloro-1,3-butadiene].....	1128-99-8	ND	39
2,4-D [2,4-Dichlorophenoxyacetic acid].....	94-75-7	ND	7
Diallate.....	2303-18-4	ND	3400
1,2-Dibromo-3-chloropropane.....	98-12-8	ND	39
1,2-Dichlorobenzene [o-Dichlorobenzene].....	95-50-1	ND	2400
1,3-Dichlorobenzene [m-Dichlorobenzene].....	541-73-1	ND	2400
1,4-Dichlorobenzene [p-Dichlorobenzene].....	106-46-7	ND	2400
3,3[prime]-Dichlorobenzidine.....	91-94-1	ND	2400
Dichlorodifluoromethane [CFC-12].....	75-71-8	ND	39
1,2-Dichloroethane [Ethylene dichloride].....	107-06-2	ND	39
1,1-Dichloroethylene [Vinylidene chloride]....	75-35-4	ND	39
Dichloromethoxy ethane [Bis(2-chloroethoxy)methane]	111-91-1	ND	2400
2,4-Dichlorophend.....	120-83-2	ND	2400
2,6-Dichlorophend.....	87-65-0	ND	2400
1,2-Dichloropropane [Propylene dichloride]....	78-87-5	ND	39
cis-1,3-Dichloropropylene.....	10081-01-5	ND	39
trans-1,3-Dichloropropylene.....	10061-02-6	ND	39
1,3-Dichloro-2-propanol.....	98-23-1	ND	30
Endosulfan I.....	959-98-8	ND	1.4
Endosulfan II.....	33213-86-9	ND	1.4
Endrin.....	72-20-8	ND	1.4
Endrin aldehyde.....	7421-93-4	ND	1.4
Endrin Ketone.....	53494-70-5	ND	1.4
Epichlorohydrin [1-Chloro-2,3-epoxy propane]...	106-89-8	ND	30
Ethylidene dichloride [1,1-Dichloroethane]....	75-34-3	ND	39
2-Fluoroacetamide.....	640-18-7	ND	100
Heptachlor.....	76-44-8	ND	1.4
Heptachlor epoxide.....	1024-57-3	ND	2.8
Hexachlorobenzene.....	118-74-1	ND	2400
Hexachloro-1,3-butadiene [Hexachlorobutadiene].	87-68-3	ND	2400
Hexachlorocyclopentadiene.....	77-47-4	ND	2400
Hexachloroethane.....	67-72-1	ND	2400
Hexachlorophene.....	70-30-4	ND	59000
Hexachloropropene [Hexachloropropylene].....	1888-71-7	ND	2400
Isodrin.....	485-73-8	ND	2400
Kepone [Chlordecone].....	143-50-0	ND	4700
Lindane [gamma-BHC] [gamma-Hexachlorocyclohexane].....	58-89-9	ND	1.4
Methylene chloride [Dichloromethane].....	75-09-2	ND	39
4,4[prime]-Methylene-bis(2-chloroaniline).....	101-14-4	ND	100
Methyl iodide [Iodomethane].....	74-88-4	ND	39

Pentachlorobenzene.....	608-83-6	ND	2400
Pentachloroethane.....	76-01-7	ND	39
Pentachloronitrobenzene [PCNB] [Quintobenzene] [Quintozene].	82-68-8	ND	2400
Pentachlorophenol.....	87-88-5	ND	2400
Pronamide.....	23950-58-5	ND	2400
Silvex [2,4,5-Trichlorophenoxypropionic acid]..	93-72-1	ND	7
2,3,7,8-Tetrachlorodibenzo-p-dioxin [2,3,7,8-TCDD]	1746-01-6	ND	30
1,2,4,5-Tetrachlorobenzene.....	95-94-3	ND	2400
1,1,2,2-Tetrachloroethane.....	79-35-4	ND	39
Tetrachloroethylene [Perchloroethylene].....	127-18-4	ND	39
2,3,4,6-Tetrachlorophenol.....	58-90-2	ND	2400
1,2,4-Trichlorobenzene.....	120-82-1	ND	2400
1,1,1-Trichloroethane [Methyl chloroform].....	71-68-8	ND	39
1,1,2-Trichloroethane [Vinyl trichloride].....	79-00-5	ND	39
Trichloroethylene.....	79-01-6	ND	39
Trichlorofluoromethane [Trichloromonofluoromethane].....	75-89-4	ND	39
2,4,5-Trichlorophenol.....	95-95-4	ND	2400
2,4,6-Trichlorophenol.....	88-08-2	ND	2400
1,2,3-Trichloropropane.....	96-18-4	ND	39
Vinyl Chloride.....	75-01-4	ND	39

Notes:

NA—Not Applicable.

ND—Nondetect.

(*) 25 or individual halogenated organics listed below.

AMENDMENT 10:

Background:

The Department is proposing to make corrections to DNREC's emergency reporting phone number to reflect the updated phone number.

Section 279.43 Used oil transportation

(c)(3)...

(i) Give notice, if required by 49 CFR 171.15, to the National Response Center (~~800-424-8802~~ (800) 662-8802 or ~~202-426-2675~~ (202) 426-2675), and give notice as required by Delaware regulations *Reporting of a Discharge of a Pollutant or Air Contaminant* to DNREC ((800) 662-8802 or (302) 739-45809401); and

Section 279.52 General Facility Standards

(b)(6)(iv)...

(B) He must immediately notify either the government official designated as the on-scene coordinator for the geographical area or the National Response Center (using their 24-hour toll free number ~~800/424-8802~~ (800) 662-8802), and give notice as required by Delaware regulations *Reporting of a Discharge of a Pollutant or Air Contaminant* to DNREC ((800) 662-8802 or (302) 739-45809401). The report must include:

AMENDMENT 11:

Background:

The Department is proposing to clarify that conditionally exempt small quantity generators (CESQG's) are only allowed to accumulate hazardous waste in containers (i.e., tank storage or other methods is prohibited).

Section 261.5 Special conditions for hazardous waste generated by conditionally exempt small quantity generators.

(f)...

(4) ~~Complies~~ Only accumulates waste in containers that comply with §265.171, §265.172, and §265.173 of these regulations;

(g)...

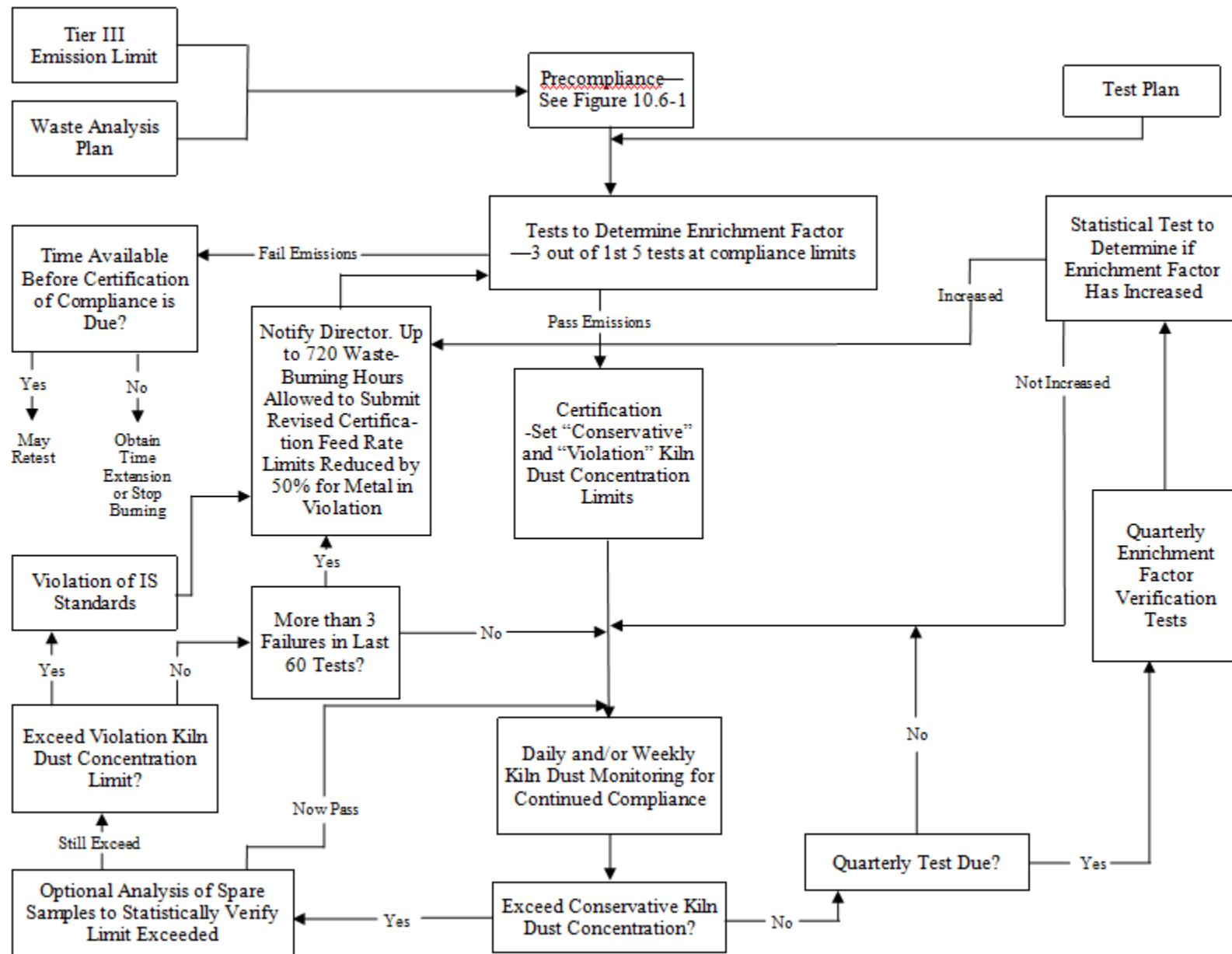
(4) ~~Complies~~ Only accumulates waste in containers that comply with §265.171, §265.172, and §265.173 of these regulations;

AMENDMENT 12:

Background: DNREC has identified an error in DRGHW, Part 266, Appendix IX, Figure 10.4-1. There is currently a line from the box “More than 3 Failures in Last 60 Tests” to the box “Now Pass. This line does not appear in the corresponding federal regulations and should not be there. Additionally, the line from the box “Optional analysis of spare samples to statistically verify limit exceeded” through “Now Pass” is missing an arrowhead at the end of the line.

Figure 10.4-1 will be deleted and replaced with:

Figure 10.4-1
Compliance Implementation Flow Chart



AMENDMENT 13:

Background: DNREC is deleting requirements related to manifests that are no longer applicable.

Section 262.20 General requirements.

(a)...

(2) The revised manifest form and procedures in §§260.10, 261.7, 262.20, 262.27, 262.32, 262.34, 262.54, 262.60, the appendix to ~~part~~ Part 262 of these regulations, and 40 CFR § 262.21 ~~shall not apply until September 5, 2006. The manifest form and procedures in §§260.10, 261.7, 262.20, 262.21, 262.32, 262.34, 262.54, 262.60, and the Appendix to part 262, contained in parts 260 to 265, edition revised as of July 1, 2004, shall be applicable until September 5, 2006~~ are applicable to all manifested shipments of hazardous waste.

AMENDMENT 14:

Background: DNREC has identified and error in DRGHW §265.276(a), which references §272.72(a)(3). The correct reference in §~~270.72(a)(3)~~ 122.72(a)(3)].

Section 265.276 Food chain crops.

(a) An owner or operator of a hazardous waste land treatment facility on which food chain crops are being grown, or have been grown and will be grown in the future, must notify the Secretary within 60 days after the effective date of this part.

[Comment: The growth of food chain crops at a facility which has never before been used for this purpose is a significant change in process under §272.72(a)(3)~~270.72(a)(3)~~

122.72(a)(3)] of these regulations. Owners or operators of such land treatment facilities who propose to grow food chain crops after the effective date of this ~~Part~~ part must comply with §272.72(a)(3)~~270.72(a)(3)~~ 122.72(a)(3)] of these regulations.]

AMENDMENT 15:

Background: DNREC has identified errors made over time in modifications made to Part 268, particularly in the tables involving treatment standards for land disposal of hazardous waste. As DNREC desires its land disposal restriction regulations to be identical to the federal regulations, DNREC is proposing to delete the entire Part 268 and replace it verbatim with the text appearing in 40 CFR Part 268.

Part 268 – Land Disposal Restrictions

The text of Part 268 will be deleted in its entirety and replaced with the following text:

Subpart A—General

Section 268.1 Purpose, scope, and applicability.

(a) This part identifies hazardous wastes that are restricted from land disposal and defines those limited circumstances under which an otherwise prohibited waste may continue to be land disposed.

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

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

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

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

(3) Wastes that are hazardous only because they exhibit a hazardous characteristic, and which are otherwise prohibited under this part, or 40 CFR Part 148, are not prohibited if the wastes:

(i) Are disposed into a nonhazardous or hazardous injection well as defined under 40 CFR 144.6 and 146.5; and

(ii) Do not exhibit any prohibited characteristic of hazardous waste identified in Part 261, Subpart C at the point of injection.

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

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

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

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

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

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

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

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

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

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

(4) *De minimis* losses of characteristic wastes to wastewaters are not considered to be prohibited wastes and are defined as losses from normal material handling operations (e.g. spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other

devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well-maintained pump packings and seals; sample purgings; and relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; rinsate from empty containers or from containers that are rendered empty by that rinsing; and laboratory wastes not exceeding one per cent of the total flow of wastewater into the facility's headworks on an annual basis, or with a combined annualized average concentration not exceeding one part per million in the headworks of the facility's wastewater treatment or pretreatment facility.

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

(1) Batteries as described in §273.2 of these regulations;

(2) Pesticides as described in §273.3 of these regulations;

(3) Mercury-containing equipment as described in §273.4 of these regulations; and

(4) Lamps as described in §273.5 of these regulations.

Section 268.2 Definitions applicable in this part.

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

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

(b) “**Hazardous constituent or constituents**” means those constituents listed in Appendix VIII to Part 261 of these regulations.

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

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

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

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

(g) “**Debris**” means solid material exceeding a 60 mm particle size that is intended for disposal and that is: A manufactured object; or plant or animal matter; or natural geologic material. However, the following materials are not debris: any material for which a specific treatment standard is provided in Subpart D, Part 268, namely lead acid batteries, cadmium batteries, and radioactive lead solids; process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by §268.45 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.

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

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

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

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

Section 268.3 Dilution prohibited as a substitute for treatment.

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

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

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

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

Section 268.4 Treatment surface impoundment exemption.

- (a) Wastes which are otherwise prohibited from land disposal under this part may be treated in a surface impoundment or series of impoundments provided that:
 - (1) Treatment of such wastes occurs in the impoundments;
 - (2) The following conditions are met:
 - (i) *Sampling and testing.* For wastes with treatment standards in Subpart D of this part and/or prohibition levels in Subpart C of this part or RCRA section 3004(d), the residues from treatment are analyzed, as specified in §268.7 or §268.32, to determine if they meet the applicable treatment standards or where no treatment standards have been established for the waste, the applicable prohibition levels. The sampling method, specified in the waste analysis plan under §264.13 or §265.13, must be designed such that representative samples of the sludge and the supernatant are tested separately rather than mixed to form homogeneous samples.
 - (ii) *Removal.* The following treatment residues (including any liquid waste) must be removed at least annually; residues which do not meet the treatment standards promulgated under Subpart D of this part; residues which do not meet the prohibition levels established under Subpart C of this part or imposed by statute (where no treatment standards have been established); residues which are from the treatment of wastes prohibited from land disposal under Subpart C of this part (where no treatment standards have been established and no prohibition levels apply); or residues from managing listed wastes which are not delisted under §260.22 of these regulations. If the volume of liquid flowing through the impoundment or series of

impoundments annually is greater than the volume of the impoundment or impoundments, this flow-through constitutes removal of the supernatant for the purpose of this requirement.

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

(iv) Recordkeeping. Sampling and testing and recordkeeping provisions of §§264.13 and 265.13 of these regulations apply.

(3) The impoundment meets the design requirements of §264.221(c) or §265.221(a) of these regulations, regardless that the unit may not be new, expanded, or a replacement, and be in compliance with applicable ground water monitoring requirements of Subpart F of Part 264 or Part 265 of these regulations unless:

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

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

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

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

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

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

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

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

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

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

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

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

(2) He has entered into a binding contractual commitment to construct or otherwise provide alternative treatment, recovery (e.g., recycling), or disposal capacity that meets the treatment standards specified in Subpart D or, where treatment standards have not been specified, such treatment, recovery, or disposal capacity is protective of human health and the environment.

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

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

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

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

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

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

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

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

(d) An extension will apply only to the waste generated at the individual facility covered by the application and will not apply to restricted waste from any other facility.

(e) On the basis of the information referred to in paragraph (a) of this section, after notice and opportunity for comment, and after consultation with appropriate State agencies in all affected States, the EPA Administrator may grant an extension of up to 1 year from the effective date. The EPA Administrator may renew this extension for up to 1 additional year upon the request of the applicant if the demonstration required in paragraph (a) of this section can still be made. In no event will an extension extend

beyond 24 months from the applicable effective date specified in Subpart C of Part 268. The length of any extension authorized will be determined by the EPA Administrator based on the time required to construct or obtain the type of capacity needed by the applicant as described in the completion schedule discussed in paragraph (a)(5) of this section. The EPA Administrator will give public notice of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a petition will be published in the FEDERAL REGISTER.

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

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

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

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

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

(i) The landfill, if in interim status, is in compliance with the requirements of Subpart F of Part 265 and §265.301 (a), (c), and (d) of these regulations; or,

(ii) The landfill, if permitted, is in compliance with the requirements of Subpart F of Part 264 and §264.301 (c), (d) and (e) of these regulations; or

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

(iv) The surface impoundment, if permitted, is in compliance with the requirements of Subpart F of Part 264 and §264.221 (c), (d) and (e) of these regulations; or

(v) The surface impoundment, if newly subject to RCRA section 3005(j)(1) due to the promulgation of additional listings or characteristics for the identification of hazardous waste, is in compliance with the requirements of Subpart F of Part 265 of these regulations within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of §265.221 (a), (c) and (d) of these regulations within 48 months after the promulgation of additional listings or

characteristics of hazardous waste. If a national capacity variance is granted, during the period the variance is in effect, the surface impoundment, if newly subject to RCRA section 3005(j)(1) due to the promulgation of additional listings or characteristics of hazardous waste, is in compliance with the requirements of Subpart F of Part 265 of these regulations within 12 months after the promulgation of additional listings or characteristics of hazardous waste, and with the requirements of §265.221 (a), (c) and (d) of these regulations within 48 months after the promulgation of additional listings or characteristics of hazardous waste; or

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

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

Section 268.6 Petitions to allow land disposal of a waste prohibited under Subpart C of Part 268.

(a) Any person seeking an exemption from a prohibition under Subpart C of this part for the disposal of a restricted hazardous waste in a particular unit or units must submit a petition to the 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 demonstration must include the following components:

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

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

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

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

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

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

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

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

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

- (4) A quality assurance and quality control plan that addresses all aspects of the demonstration must be approved by the EPA Administrator; and,
- (5) An analysis must be performed to identify and quantify any aspects of the demonstration that contribute significantly to uncertainty. This analysis must include an evaluation of the consequences of predictable future events, including, but not limited to, earthquakes, floods, severe storm events, droughts, or other natural phenomena.

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

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

- (i) The media monitored in the cases where monitoring of the environment around the unit is required;
- (ii) The type of monitoring conducted at the unit, in the cases where monitoring of the unit is required;
- (iii) The location of the monitoring stations;
- (iv) The monitoring interval (frequency of monitoring at each station);
- (v) The specific hazardous constituents to be monitored;
- (vi) The implementation schedule for the monitoring program;
- (vii) The equipment used at the monitoring stations;
- (viii) The sampling and analytical techniques employed; and
- (ix) The data recording/reporting procedures.

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

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

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

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

- (i) All sampling, testing, and analytical data must be approved by the EPA Administrator and must provide data that is accurate and reproducible.
- (ii) All estimation and monitoring techniques must be approved by the EPA Administrator.
- (iii) A quality assurance and quality control plan addressing all aspects of the monitoring program must be provided to and approved by the EPA Administrator.

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

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

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

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

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

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

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

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

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

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

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

(i) If approved, the petition will apply to land disposal of the specific restricted waste at the individual disposal unit described in the demonstration and will not apply to any other restricted waste at that disposal unit, or to that specific restricted waste at any other disposal unit.

- (j) The EPA Administrator will give public notice in the FEDERAL REGISTER of the intent to approve or deny a petition and provide an opportunity for public comment. The final decision on a petition will be published in the FEDERAL REGISTER.
- (k) The term of a petition granted under this section shall be no longer than the term of the RCRA permit if the disposal unit is operating under a RCRA permit, or up to a maximum of 10 years from the date of approval provided under paragraph (g) of this section if the unit is operating under interim status. In either case, the term of the granted petition shall expire upon the termination or denial of a RCRA permit, or upon the termination of interim status or when the volume limit of waste to be land disposed during the term of petition is reached.
- (l) Prior to the EPA Administrator's decision, the applicant is required to comply with all restrictions on land disposal under this part once the effective date for the waste has been reached.
- (m) The petition granted by the EPA Administrator does not relieve the petitioner of his responsibilities in the management of hazardous waste under these regulations.
- (n) Liquid hazardous wastes containing polychlorinated biphenyls at concentrations greater than or equal to 500 ppm are not eligible for an exemption under this section.

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

(a) Requirements for generators:

(1) A generator of hazardous waste must determine if the waste has to be treated before it can be land disposed. This is done by determining if the hazardous waste meets the treatment standards in §268.40, 268.45, or §268.49. This determination can be made concurrently with the hazardous waste determination required in §262.11 of these regulations, in either of two ways: testing the waste or using knowledge of the waste. If the generator tests the waste, testing would normally determine the total concentration of hazardous constituents, or the concentration of hazardous constituents in an extract of the waste obtained using test method 1311 in "Test Methods of Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, (incorporated by reference, see §260.11 of these regulations), depending on whether the treatment standard for the waste is expressed as a total concentration or concentration of hazardous constituent in the waste's extract. (Alternatively, the generator must send the waste to a RCRA-permitted hazardous waste treatment facility, where the waste treatment facility must comply with the requirements of §264.13 of these regulations and paragraph (b) of this section.) In addition, some hazardous wastes must be treated by particular treatment methods before they can be land disposed and some soils are contaminated by such hazardous wastes. These treatment standards are also found in §268.40, and are described in detail in §268.42, Table 1. These wastes, and soils contaminated with such wastes, do not need to be tested (however, if they are in a waste mixture, other wastes with concentration level treatment standards would have to be tested). If a generator determines they are managing a waste or soil contaminated with a waste, that displays a hazardous characteristic of ignitability, corrosivity, reactivity, or toxicity, they

must comply with the special requirements of §268.9 of this part in addition to any applicable requirements in this section.

(2) If the waste or contaminated soil does not meet the treatment standards, or if the generator chooses not to make the determination of whether his waste must be treated, with the initial shipment of waste to each treatment or storage facility, the generator must send a one-time written notice to each treatment or storage facility receiving the waste, and place a copy in the file. The notice must include the information in column “268.7(a)(2)” of the Generator Paperwork Requirements Table in paragraph (a)(4) of this section.

(Alternatively, if the generator chooses not to make the determination of whether the waste must be treated, the notification must include the EPA Hazardous Waste Numbers and Manifest Number of the first shipment and must state “This hazardous waste may or may not be subject to the LDR treatment standards. The treatment facility must make the determination.”) No further notification is necessary until such time that the waste or facility change, in which case a new notification must be sent and a copy placed in the generator's file.

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

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

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

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

(iii) If the waste changes, the generator must send a new notice and certification to the receiving facility, and place a copy in their files. Generators of hazardous debris excluded from the definition of hazardous waste under §261.3(f) of these regulations are not subject to these requirements.

(4) For reporting, tracking, and recordkeeping when exceptions allow certain wastes or contaminated soil that do not meet the treatment standards to be land disposed: There are certain exemptions from the requirement that hazardous wastes or contaminated soil meet treatment standards before they can be land disposed. These include, but are not limited to case-by-case extensions under §268.5, disposal in a no-migration unit under §268.6, or a national capacity variance or case-by-case capacity variance under Subpart C of this part. If a generator's waste is so exempt, then with the initial shipment of waste, the generator must send a one-time written notice to each land disposal facility receiving the waste. The notice must include the information indicated in column “268.7(a)(4)” of the Generator Paperwork Requirements Table below. If the waste changes, the generator must send a new notice to the receiving facility, and place a copy in their files.

GENERATOR PAPERWORK REQUIREMENTS TABLE

<u>Required information</u>	<u>§268.7 (a)(2)</u>	<u>§268.7 (a)(3)</u>	<u>§268.7 (a)(4)</u>	<u>§268.7 (a)(9)</u>
1. EPA Hazardous Waste Numbers and Manifest Number of first shipment	✓	✓	✓	✓
2. Statement: this waste is not prohibited from land disposal			✓	
3. The waste is subject to the LDRs. The constituents of concern for F001-F005, and F039, and underlying hazardous constituents in characteristic wastes, unless the waste will be treated and monitored for all constituents. If all constituents will be treated and monitored, there is no need to put them all on the LDR notice	✓	✓		
4. The notice must include the applicable wastewater/nonwastewater category (see §§268.2(d) and (f)) and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide)	✓	✓		
5. Waste analysis data (when available)	✓	✓	✓	
6. Date the waste is subject to the prohibition			✓	
7. For hazardous debris, when treating with the alternative treatment technologies provided by §268.45: the contaminants subject to treatment, as described in §268.45(b); and an indication that these contaminants are being treated to comply with §268.45	✓		✓	
8. For contaminated soil subject to LDRs as provided in §268.49(a), the constituents subject to treatment as described in §268.49(d), and the following statement: This contaminated soil [does/does not] contain listed hazardous	✓	✓		

waste and [does/does not] exhibit a characteristic of hazardous waste and [is subject to/complies with] the soil treatment standards as provided by §268.49(c) or the universal treatment standards				
9. A certification is needed (see applicable section for exact wording)		✓		✓

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

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

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

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

(6) If a generator determines that the waste or contaminated soil is restricted based solely on his knowledge of the waste, all supporting data used to make this determination must be retained on-site in the generator's files. If a generator determines that the waste is restricted based on testing this waste or an extract developed using the test method 1311 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods," EPA Publication SW-846, as referenced in §260.11 of these regulations, and all waste analysis data must be retained on-site in the generator's files.

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

(8) Generators must retain on-site a copy of all notices, certifications, waste analysis data, and other documentation produced pursuant to this section for at least three years from the date that the waste that is the subject of such

documentation was last sent to on-site or off-site treatment, storage, or disposal. The three year record retention period is automatically extended during the course of any unresolved enforcement action regarding the regulated activity or as requested by the Secretary. The requirements of this paragraph apply to solid wastes even when the hazardous characteristic is removed prior to disposal, or when the waste is excluded from the definition of hazardous or solid waste under §261.2 through §261.6, or exempted from these regulations, subsequent to the point of generation.

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

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

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

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

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

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

(10) [Reserved].

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

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

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

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

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

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

TREATMENT FACILITY PAPERWORK REQUIREMENTS TABLE

<u>Required information</u>	<u>§268.7(b)</u>
<u>1. EPA Hazardous Waste Numbers and Manifest Number of first shipment</u>	<u>✓</u>
<u>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.</u>	<u>✓</u>
<u>3. The notice must include the applicable wastewater/ nonwastewater category (see §§268.2(d) and (f)) and subdivisions made within a waste code based on waste-specific criteria (such as D003 reactive cyanide)</u>	<u>✓</u>
<u>4. Waste analysis data (when available)</u>	<u>✓</u>
<u>5. For contaminated soil subject to LDRs as provided in §268.49(a), the constituents subject to treatment as described in §268.49(d) and the following statement, “this contaminated soil [does/does not] exhibit a characteristic of hazardous waste and [is subject to/complies with] the soil treatment standards as provided by §268.49(c)”.</u>	<u>✓</u>
<u>6. A certification is needed (see applicable section for exact wording)</u>	<u>✓</u>

(4) The treatment facility must submit a one-time certification signed by an authorized representative with the initial shipment of waste or treatment residue of a restricted waste to the land disposal facility. The certification must state:

I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification. Based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the treatment process has been operated and maintained properly so as to comply with the treatment standards specified in §268.40 without impermissible dilution of the prohibited waste. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

A certification is also necessary for contaminated soil and it must state: I certify under penalty of law that I have personally examined and am familiar with the treatment technology and operation of the treatment process used to support this certification and believe that it has been maintained and operated properly so as to comply with treatment standards specified in §268.49 without impermissible dilution of the prohibited wastes. I am aware there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment.

(i) A copy of the certification must be placed in the treatment facility's on-site files. If the waste or treatment residue changes, or the receiving facility changes, a new certification must be sent to the receiving facility, and a copy placed in the file.

(ii) Debris excluded from the definition of hazardous waste under §261.3(f) of these regulations (i.e., debris treated by an extraction or destruction technology provided by Table 1, §268.45, and debris that the Secretary has determined does not contain hazardous waste), however, is subject to the notification and certification requirements of paragraph (d) of this section rather than the certification requirements of this paragraph.

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

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

(iv) For characteristic wastes that are subject to the treatment standards in §268.40 (other than those expressed as a method of treatment), or §268.49, and that contain underlying hazardous constituents as defined in §268.2(i); if these wastes are treated on-site to remove the hazardous characteristic; and are then sent off-site for treatment of underlying hazardous constituents, the certification must state the following:

I certify under penalty of law that the waste has been treated in accordance with the requirements of §268.40 or §268.49 to remove the hazardous characteristic. This decharacterized waste contains underlying hazardous constituents that require further treatment to meet treatment standards. I am aware that there are significant

penalties for submitting a false certification, including the possibility of fine and imprisonment.

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

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

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

(6) Where the wastes are recyclable materials used in a manner constituting disposal subject to the provisions of §266.20(b) of these regulations regarding treatment standards and prohibition levels, the owner or operator of a treatment facility (i.e., the recycler) must, for the initial shipment of waste, prepare a one-time certification described in paragraph (b)(4) of this section, and a one-time notice which includes the information in paragraph (b)(3) of this section (except the manifest number). The certification and notification must be placed in the facility's on-site files. If the waste or the receiving facility changes, a new certification and notification must be prepared and placed in the on-site files. In addition, the recycling facility must also keep records of the name and location of each entity receiving the hazardous waste-derived product.

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

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

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

(d) Generators or treaters who first claim that hazardous debris is excluded from the definition of hazardous waste under §261.3(f) of these regulations (i.e., debris treated by an extraction or destruction technology provided by Table 1, §268.45, and debris that the Secretary has determined does not contain hazardous waste) are subject to the following notification and certification requirements:

(1) A one-time notification, including the following information, must be submitted to the Secretary:

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

(ii) A description of the hazardous debris as initially generated, including the applicable EPA Hazardous Waste Number(s); and

(iii) For debris excluded under §261.3(f)(1) of these regulations, the technology from Table 1, §268.45, used to treat the debris.

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

(3) For debris excluded under §261.3(f)(1) of these regulations, the owner or operator of the treatment facility must document and certify compliance with the treatment standards of Table 1, §268.45, as follows:

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

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

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

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

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

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

Section 268.8 [Reserved]

Section 268.9 Special rules regarding wastes that exhibit a characteristic.

(a) The initial generator of a solid waste must determine each EPA Hazardous Waste Number (waste code) applicable to the waste in order to determine the applicable treatment standards under Subpart D of this part. This determination may be made concurrently with the hazardous waste determination required in §262.11 of these regulations. For purposes of Part 268, the waste will carry the waste code for any applicable listed waste (Part 261, Subpart D). In addition, where the waste exhibits a characteristic, the waste will carry one or more of the characteristic waste codes (Part 261, Subpart C), except when the treatment standard for the listed waste operates in lieu of the treatment standard for the characteristic waste, as specified in paragraph (b) of this section. If the generator determines that their waste displays a hazardous characteristic (and is not D001 nonwastewaters treated by CMBST, RORGs, OR POLYM of §268.42, Table 1), the generator must determine the underlying hazardous constituents (as defined at §268.2(i)) in the characteristic waste.

(b) Where a prohibited waste is both listed under Part 261, Subpart D and exhibits a characteristic under Part 261, Subpart C, the treatment standard for the waste code listed in Part 261, Subpart D will operate in lieu of the standard for the waste code under Part 261, Subpart C, provided that the treatment standard for the listed waste includes a treatment standard for the constituent that causes the waste to exhibit the characteristic. Otherwise, the waste must meet the treatment standards for all applicable listed and characteristic waste codes.

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

(d) Wastes that exhibit a characteristic are also subject to §268.7 requirements, except that once the waste is no longer hazardous, a one-time notification and certification must be placed in the generator's or treater's on-site files. The notification and certification must be updated if the process or operation generating the waste changes and/or if the Subtitle D facility receiving the waste changes.

(1) The notification must include the following information:

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

(ii) A description of the waste as initially generated, including the applicable EPA hazardous waste code(s), treatability group(s), and underlying hazardous constituents (as defined in §268.2(i)), unless the waste will be treated and monitored for all underlying hazardous constituents. If all underlying hazardous constituents will be treated and monitored, there is no requirement to list any of the underlying hazardous constituents on the notice.

(2) The certification must be signed by an authorized representative and must state the language found in §268.7(b)(4).

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

(ii) [Reserved]

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

Sections 268.10-268.13 [Reserved]

Section 268.14 Surface impoundment exemptions.

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

(b) Wastes which are newly identified or listed under RCRA §3001 after November 8, 1984, and stored in a surface impoundment that is newly subject to Subtitle C of RCRA as a result of the additional identification or listing, may continue to be stored in the surface impoundment for 48 months after the promulgation of the additional listing or characteristic, notwithstanding that the waste is otherwise prohibited from land disposal, provided that the surface impoundment is in compliance with the requirements of Subpart F of Part 265 of these regulations within 12 months after promulgation of the new listing or characteristic.

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

Subpart C—Prohibitions on Land Disposal

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

(a) Effective August 23, 2005, the waste specified in Part 261 as EPA Hazardous Waste Number K181, and soil and debris contaminated with this waste, radioactive wastes mixed with this waste, and soil and debris contaminated with radioactive wastes mixed with this waste are prohibited from land disposal.

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

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

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

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

(4) Hazardous debris has met the treatment standards in §268.40 or the alternative treatment standards in §268.45; or

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

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

Sections 268.21-268.29 [Reserved]

Section 268.30 Waste specific prohibitions—wood preserving wastes.

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

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

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

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

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

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

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

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

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

§268.31 Waste specific prohibitions—Dioxin-containing wastes.

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

(1) The F020-F023 and F026-F028 dioxin-containing waste is contaminated soil and debris resulting from a response action taken under section 104 or 106 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) or a corrective action taken under 7 Del. C., Chapter 63.

(b) Effective November 8, 1990, the F020-F023 and F026-F028 dioxin-containing wastes listed in paragraph (a)(1) of this section are prohibited from land disposal.

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

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

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

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

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

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

(a) Effective December 26, 2000, the following wastes are prohibited from land disposal: any volumes of soil exhibiting the toxicity characteristic solely because of the presence of metals (D004—D011) and containing PCBs.

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

(1)(i) The wastes contain halogenated organic compounds in total concentration less than 1,000 mg/kg; and

(ii) The wastes meet the treatment standards specified in Subpart D of this part for EPA hazardous waste numbers D004—D011, as applicable; or

(2)(i) The wastes contain halogenated organic compounds in total concentration less than 1,000 mg/kg; and

(ii) The wastes meet the alternative treatment standards specified in §268.49 for contaminated soil; or

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

(4) The wastes meet applicable alternative treatment standards established pursuant to a petition granted under §268.44.

Section 268.33 Waste specific prohibitions—chlorinated aliphatic wastes.

(a) Effective May 8, 2001, the wastes specified in Part 261 as EPA Hazardous Wastes Numbers K174, and K175, soil and debris contaminated with these wastes, radioactive wastes mixed with these wastes, and soil and debris contaminated with radioactive wastes mixed with these wastes are prohibited from land disposal.

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

- (1) The wastes meet the applicable treatment standards specified in Subpart D of this part;
 - (2) Persons have been granted an exemption from a prohibition pursuant to a petition under §268.6, with respect to those wastes and units covered by the petition;
 - (3) The wastes meet the applicable treatment standards established pursuant to a petition granted under §268.44;
 - (4) Hazardous debris has met the treatment standards in §268.40 or the alternative treatment standards in §268.45; or
 - (5) Persons have been granted an extension to the effective date of a prohibition pursuant to §268.5, with respect to these wastes covered by the extension.
- (c) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in §268.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains regulated constituents in excess of the applicable levels of Subpart D of this part, the waste is prohibited from land disposal, and all requirements of Part 268 are applicable, except as otherwise specified.
- (d) Disposal of K175 wastes that have complied with all applicable §268.40 treatment standards must also be macroencapsulated in accordance with §268.45, Table 1 unless the waste is placed in:
- (1) A Subtitle C monofill containing only K175 wastes that meets all applicable §268.40 treatment standards; or
 - (2) A dedicated Subtitle C landfill cell in which all other wastes being co-disposed are at pH≤6.0.

Section 268.34 Waste specific prohibitions—toxicity characteristic metal wastes.

- (a) Effective August 24, 1998, the following wastes are prohibited from land disposal: the wastes specified in Part 261 as EPA Hazardous Waste numbers D004-D011 that are newly identified (i.e., wastes, soil, or debris identified as hazardous by the Toxic Characteristic Leaching Procedure but not the Extraction Procedure), and waste, soil, or debris from mineral processing operations that is identified as hazardous by the specifications in Part 261.
- (b) Effective November 26, 1998, the following waste is prohibited from land disposal: Slag from secondary lead smelting which exhibits the Toxicity Characteristic due to the presence of one or more metals.
- (c) Effective May 26, 2000, the following wastes are prohibited from land disposal: newly identified characteristic wastes from elemental phosphorus processing; radioactive wastes mixed with EPA Hazardous wastes D004-D011 that are newly identified (i.e., wastes, soil, or debris identified as hazardous by the Toxic Characteristic Leaching Procedure but not the Extraction Procedure); or mixed with newly identified characteristic mineral processing wastes, soil, or debris.
- (d) Between May 26, 1998 and May 26, 2000, newly identified characteristic wastes from elemental phosphorus processing, radioactive waste mixed with D004-D011

wastes that are newly identified (i.e., wastes, soil, or debris identified as hazardous by the Toxic Characteristic Leaching Procedure but not the Extraction Procedure), or mixed with newly identified characteristic mineral processing wastes, soil, or debris may be disposed in a landfill or surface impoundment only if such unit is in compliance with the requirements specified in §268.5(h) of this part.

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

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

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

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

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

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

Section 268.35 Waste specific prohibitions—petroleum refining wastes.

(a) Effective February 8, 1999, the wastes specified in Part 261 as EPA Hazardous Wastes Numbers K169, K170, K171, and K172, soils and debris contaminated with these wastes, radioactive wastes mixed with these hazardous wastes, and soils and debris contaminated with these radioactive mixed wastes, are prohibited from land disposal.

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

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

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

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

(4) Hazardous debris that have met treatment standards in §268.40 or in the alternative treatment standards in §268.45; or

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

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

Section 268.36 Waste specific prohibitions—inorganic chemical wastes.

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

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

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

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

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

(4) Hazardous debris has met the treatment standards in §268.40 or the alternative treatment standards in §268.45; or

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

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

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

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

for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or greater than these technologies.

(b) Effective February 10, 1994, the wastes specified in §261.21 as D001 (and is not in the High TOC Ignitable Liquids Subcategory), and specified in §261.22 as D002, that are managed in systems defined in 40 CFR 144.6(e) and 146.5(e) as Class V injection wells, that do not engage in CWA-equivalent treatment before injection, are prohibited from land disposal.

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

(a) Effective December 19, 1994, the wastes specified in §261.32 as EPA Hazardous Waste numbers K141, K142, K143, K144, K145, K147, K148, K149, K150, and K151 are prohibited from land disposal. In addition, debris contaminated with EPA Hazardous Waste numbers F037, F038, K107-K112, K117, K118, K123-K126, K131, K132, K136, U328, U353, U359, and soil and debris contaminated with D012-D043, K141-K145, and K147-K151 are prohibited from land disposal. The following wastes that are specified in §261.24, Table 1 as EPA Hazardous Waste numbers: D012, D013, D014, D015, D016, D017, D018, D019, D020, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D031, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043 that are not radioactive, or that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that are zero dischargers that do not engage in CWA-equivalent treatment before ultimate land disposal, or that are injected in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), are prohibited from land disposal. CWA-equivalent treatment means biological treatment for organics, alkaline chlorination or ferrous sulfate precipitation for cyanide, precipitation/ sedimentation for metals, reduction of hexavalent chromium, or other treatment technology that can be demonstrated to perform equally or better than these technologies.

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

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

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

- (1) The wastes meet the applicable treatment standards specified in Subpart D of this part;
 - (2) Persons have been granted an exemption from a prohibition pursuant to a petition under §268.6, with respect to those wastes and units covered by the petition;
 - (3) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under §268.44;
 - (4) Persons have been granted an extension to the effective date of a prohibition pursuant to §268.5, with respect to these wastes covered by the extension.
- (e) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in §268.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Subpart D levels, the waste is prohibited from land disposal, and all requirements of Part 268 are applicable, except as otherwise specified.

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

- (a) On July 8, 1996, the wastes specified in §261.32 as EPA Hazardous Waste numbers K156-K159, and K161; and in §261.33 as EPA Hazardous Waste numbers P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U278-U280, U364, U367, U372, U373, U387, U389, U394, U395, U404, and U409-U411 are prohibited from land disposal. In addition, soil and debris contaminated with these wastes are prohibited from land disposal.
- (b) On July 8, 1996, the wastes identified in §261.23 as D003 that are managed in systems other than those whose discharge is regulated under the Clean Water Act (CWA), or that inject in Class I deep wells regulated under the Safe Drinking Water Act (SDWA), or that are zero dischargers that engage in CWA-equivalent treatment before ultimate land disposal, are prohibited from land disposal. This prohibition does not apply to unexploded ordnance and other explosive devices which have been the subject of an emergency response. (Such D003 wastes are prohibited unless they meet the treatment standard of DEACT before land disposal (see §268.40)).
- (c) On September 21, 1998, the wastes specified in §261.32 as EPA Hazardous Waste number K088 are prohibited from land disposal. In addition, soil and debris contaminated with these wastes are prohibited from land disposal.
- (d) On April 8, 1998, radioactive wastes mixed with K088, K156-K159, K161, P127, P128, P185, P188-P192, P194, P196-P199, P201-P205, U271, U278-U280, U364, U367, U372, U373, U387, U389, U394, U395, U404, and U409-U411 are prohibited from land disposal. In addition, soil and debris contaminated with these radioactive mixed wastes are prohibited from land disposal.
- (e) Between July 8, 1996, and April 8, 1998, the wastes included in paragraphs (a), (c), and (d) of this section may be disposed in a landfill or surface impoundment, only if such unit is in compliance with the requirements specified in §268.5(h)(2).
- (f) The requirements of paragraphs (a), (b), (c), and (d) of this section do not apply if:

- (1) The wastes meet the applicable treatment standards specified in Subpart D of this part;
 - (2) Persons have been granted an exemption from a prohibition pursuant to a petition under §268.6, with respect to those wastes and units covered by the petition;
 - (3) The wastes meet the applicable alternate treatment standards established pursuant to a petition granted under §268.44;
 - (4) Persons have been granted an extension to the effective date of a prohibition pursuant to §268.5, with respect to these wastes covered by the extension.
- (g) To determine whether a hazardous waste identified in this section exceeds the applicable treatment standards specified in §268.40, the initial generator must test a sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, or the generator may use knowledge of the waste. If the waste contains constituents in excess of the applicable Subpart D levels, the waste is prohibited from land disposal, and all requirements of this Part 268 are applicable, except as otherwise specified.

Subpart D—Treatment Standards

§268.40 Applicability of treatment standards.

- (a) A prohibited waste identified in the table “Treatment Standards for Hazardous Wastes” may be land disposed only if it meets the requirements found in the table. For each waste, the table identifies one of three types of treatment standard requirements:
- (1) All hazardous constituents in the waste or in the treatment residue must be at or below the values found in the table for that waste (“total waste standards”); or
 - (2) The hazardous constituents in the extract of the waste or in the extract of the treatment residue must be at or below the values found in the table (“waste extract standards”); or
 - (3) The waste must be treated using the technology specified in the table (“technology standard”), which are described in detail in §268.42, Table 1—Technology Codes and Description of Technology-Based Standards.
- (b) For wastewaters, compliance with concentration level standards is based on maximums for any one day, except for D004 through D011 wastes for which the previously promulgated treatment standards based on grab samples remain in effect. For all nonwastewaters, compliance with concentration level standards is based on grab sampling. For wastes covered by the waste extract standards, the Test Method 1311, the Toxicity Characteristic Leaching Procedure found in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication SW-846, as incorporated by reference in §260.11, must be used to measure compliance. An exception is made for D004 and D008, for which either of two test methods may be used: Method 1311, or Method 1310B, the Extraction Procedure Toxicity Test. For wastes covered by a technology standard, the wastes may be land disposed after being treated using that specified technology or an equivalent treatment technology approved by the EPA Administrator under the procedures set forth in §268.42(b).

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

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

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

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

(3) The treatment or disposal facility may demonstrate compliance with organic constituents if good-faith analytical efforts achieve detection limits for the regulated organic constituents that do not exceed the treatment standards specified in this section by an order of magnitude.

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

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

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

technology code CHOXD, or combustion as defined as technology code CMBST at §268.42 Table 1, for wastewaters.

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

(i) [Reserved]

(j) Effective September 4, 1998, the treatment standards for the wastes specified in §261.33 as EPA Hazardous Waste numbers P185, P191, P192, P197, U364, U394, and U395 may be satisfied by either meeting the constituent concentrations presented in the table “Treatment Standards for Hazardous Wastes” in this section, or by treating the waste by the following technologies: combustion, as defined by the technology code CMBST at §268.42 Table 1 of this Part, for nonwastewaters; and, biodegradation as defined by the technology code BIODG, carbon adsorption as defined by the technology code CARBN, chemical oxidation as defined by the technology code CHOXD, or combustion as defined as technology code CMBST at §268.42 Table 1 of this part, for wastewaters.

DRGHW 268.40 – Treatment Standards for Hazardous Wastes Table

§268.41 Treatment standards expressed as concentrations in waste extract.

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

§268.42 Treatment standards expressed as specified technologies.

NOTE: For the requirements previously found in this section in Table 2—Technology-Based Standards By RCRA Waste Code, and Table 3—Technology-Based Standards for Specific Radioactive Hazardous Mixed Waste, refer to §268.40.

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

DRGHW 268.42 – Table 1 – Technology Codes and Description of Technology-Based Standards

(b) 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 paragraphs (a), (c), and (d) of this section for wastes or specified in Table 1 of §268.45 for hazardous debris. The applicant must submit information demonstrating that his treatment method is in compliance with federal, state, and local requirements and is protective of human health and the environment. On the basis of such information and any other available information, the EPA Administrator may approve the use of the alternative treatment method if he finds that

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

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

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

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

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

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

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

Section 268.43 Treatment standards expressed as waste concentrations.

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

Section 268.44 Variance from a treatment standard.

(a) 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:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(m) For all variances, the petitioner must also demonstrate that compliance with any given treatment variance is sufficient to minimize threats to human health and the environment posed by land disposal of the waste. In evaluating this demonstration, DNREC 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 §§266.20 through 266.23.

(n) [Reserved]

(o) [Reserved]

Section 268.45 Treatment standards for hazardous debris.

(a) Treatment standards. Hazardous debris must be treated prior to land disposal as follows unless DNREC determines under §261.3(f)(2) of these regulations that the debris is no longer

contaminated with hazardous waste or the debris is treated to the waste-specific treatment standard provided in this subpart for the waste contaminating the debris:

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

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

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

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

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

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

(1) Toxicity characteristic debris. The contaminants subject to treatment for debris that exhibits the Toxicity Characteristic (TC) by §261.24 of these regulations are those EP constituents for which the debris exhibits the TC toxicity characteristic.

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

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

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

(d) Treatment residuals

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

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

- (ii) Residue from the treatment of hazardous debris is subject to the waste-specific treatment standards provided by Subpart D of this part for the waste contaminating the debris.
- (2) Nontoxic debris. Residue from the deactivation of ignitable, corrosive, or reactive characteristic hazardous debris (other than cyanide-reactive) that is not contaminated with a contaminant subject to treatment defined by paragraph (b) of this section, must be deactivated prior to land disposal and is not subject to the waste-specific treatment standards of Subpart D of this part.
- (3) Cyanide-reactive debris. Residue from the treatment of debris that is reactive because of cyanide must meet the treatment standards for D003 in “Treatment Standards for Hazardous Wastes” at §268.40.
- (4) Ignitable nonwastewater residue. Ignitable nonwastewater residue containing equal to or greater than 10% total organic carbon is subject to the technology specified in the treatment standard for D001: Ignitable Liquids.
- (5) Residue from spalling. Layers of debris removed by spalling are hazardous debris that remain subject to the treatment standards of this section.

DRGHW 268.45 – Table 1 – Alternative Treatment Standards for Hazardous Debris

Section 268.46 Alternative treatment standards based on HTMR.

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

Section 268.47 [Reserved]

Section 268.48 Universal treatment standards.

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

DRGHW 268.48 – Table – Universal Treatment Standards

Section 268.49 Alternative LDR treatment standards for contaminated soil.

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

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

<u>Didn't apply to the listed waste when it contaminated the soil*</u>	<u>Apply to the listed waste now</u>	<u>The soil is determined to contain the listed waste when the soil is first generated</u>	<u>Must comply with LDRs.</u>
<u>Didn't apply to the listed waste when it contaminated the soil*</u>	<u>Apply to the listed waste now</u>	<u>The soil is determined not to contain the listed waste when the soil is first generated</u>	<u>Needn't comply with LDRs.</u>
<u>Didn't apply to the listed waste when it contaminated the soil*</u>	<u>Don't apply to the listed waste now</u>		<u>Needn't comply with LDRs.</u>

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(2) Non-soil residuals are subject to:

(i) For soils contaminated by listed hazardous waste, the treatment standards applicable to the listed hazardous waste; and

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

Subpart E—Prohibitions on Storage

Section 268.50 Prohibitions on storage of restricted wastes.

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

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

(2) An owner/operator of a hazardous waste treatment, storage, or disposal facility stores such wastes in tanks, containers, or containment buildings

solely for the purpose of the accumulation of such quantities of hazardous waste as necessary to facilitate proper recovery, treatment, or disposal and:

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

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

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

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

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

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

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

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

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

Appendixes I-II to Part 268 [Reserved]

Appendix III to Part 268—List of Halogenated Organic Compounds Regulated Under §268.32

In determining the concentration of HOCs in a hazardous waste for purposes of the §268.32 land disposal prohibition, EPA has defined the HOCs that must be included in a calculation

as any compounds having a carbon-halogen bond which are listed in this Appendix (see §268.2). Appendix III to Part 268 consists of the following compounds:

I. VOLATILES

1. Bromodichloromethane
2. Bromomethane
3. Carbon Tetrachloride
4. Chlorobenzene
5. 2-Chloro-1,3-butadiene
6. Chlorodibromomethane
7. Chloroethane
8. 2-Chloroethyl vinyl ether
9. Chloroform
10. Chloromethane
11. 3-Chloropropene
12. 1,2-Dibromo-3-chloropropane
13. 1,2-Dibromomethane
14. Dibromomethane
15. Trans-1,4-Dichloro-2—butene
16. Dichlorodifluoromethane
17. 1,1-Dichloroethane
18. 1,2-Dichloroethane
19. 1,1-Dichloroethylene
20. Trans-1,2-Dichloroethene
21. 1,2-Dichloropropane
22. Trans-1,3-Dichloropropene
23. cis-1,3-Dichloropropene
24. Iodomethane
25. Methylene chloride
26. 1,1,1,2-Tetrachloroethane
27. 1,1,2,2-Tetrachloroethane
28. Tetrachloroethene
29. Tribromomethane
30. 1,1,1-Trichloroethane
31. 1,1,2-Trichloroethane
32. Trichloroethene
33. Trichloromonofluoromethane
34. 1,2,3-Trichloropropane
35. Vinyl Chloride

II. SEMIVOLATILES

1. Bis(2-chloroethoxy)ethane
2. Bis(2-chloroethyl)ether
3. Bis(2-chloroisopropyl)ether
4. p-Chloroaniline
5. Chlorobenzilate

6. p-Chloro-m-cresol
7. 2-Chloronaphthalene
8. 2-Chlorophenol
9. 3-Chloropropionitrile
10. m-Dichlorobenzene
11. o-Dichlorobenzene
12. p-Dichlorobenzene
13. 3,3'-Dichlorobenzidine
14. 2,4-Dichlorophenol
15. 2,6-Dichlorophenol
16. Hexachlorobenzene
17. Hexachlorobutadiene
18. Hexachlorocyclopentadiene
19. Hexachloroethane
20. Hexachloroprophene
21. Hexachloropropene
22. 4,4'-Methylenebis(2-chloroaniline)
23. Pentachlorobenzene
24. Pentachloroethane
25. Pentachloronitrobenzene
26. Pentachlorophenol
27. Pronamide
28. 1,2,4,5-Tetrachlorobenzene
29. 2,3,4,6-Tetrachlorophenol
30. 1,2,4-Trichlorobenzene
31. 2,4,5-Trichlorophenol
32. 2,4,6-Trichlorophenol
33. Tris(2,3-dibromopropyl)phosphate

III. ORGANOCHLORINE PESTICIDES

1. Aldrin
2. alpha-BHC
3. beta-BHC
4. delta-BHC
5. gamma-BHC
6. Chlorodane
7. DDD
8. DDE
9. DDT
10. Dieldrin
11. Endosulfan I
12. Endosulfan II
13. Endrin
14. Endrin aldehyde
15. Heptachlor
16. Heptachlor epoxide

- 17. Isodrin
- 18. Kepone
- 19. Methoxychlor
- 20. Toxaphene

IV. PHENOXYACETIC ACID HERBICIDES

- 1. 2,4-Dichlorophenoxyacetic acid
- 2. Silvex
- 3. 2,4,5-T

V. PCBs

- 1. Aroclor 1016
- 2. Aroclor 1221
- 3. Aroclor 1232
- 4. Aroclor 1242
- 5. Aroclor 1248
- 6. Aroclor 1254
- 7. Aroclor 1260
- 8. PCBs not otherwise specified

VI. DIOXINS AND FURANS

- 1. Hexachlorodibenzo-p-dioxins
- 2. Hexachlorodibenzofuran
- 3. Pentachlorodibenzo-p-dioxins
- 4. Pentachlorodibenzofuran
- 5. Tetrachlorodibenzo-p-dioxins
- 6. Tetrachlorodibenzofuran
- 7. 2,3,7,8-Tetrachlorodibenzo-p-dioxin

Appendix IV to Part 268—Wastes Excluded From Lab Packs Under the Alternative Treatment Standards of §268.42(c)

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

Appendix V to Part 268 [Reserved]

Appendix VI to Part 268—Recommended Technologies To Achieve Deactivation of Characteristics in Section 268.42

The treatment standard for many characteristic wastes is stated in the §268.40 Table of Treatment Standards as “Deactivation and meet UTS.” EPA has determined that many technologies, when used alone or in combination, can achieve the deactivation portion of the treatment standard. Characteristic wastes that are not managed in a facility regulated by the Clean Water Act (CWA) or in a CWA-equivalent facility, and that also contain underlying hazardous constituents (see §268.2(i)) must be treated not only by a “deactivating” technology to remove the characteristic, but also to achieve the universal treatment standards

(UTS) for underlying hazardous constituents. The following appendix presents a partial list of technologies, utilizing the five letter technology codes established in §268.42 Table 1, that may be useful in meeting the treatment standard. Use of these specific technologies is not mandatory and does not preclude direct reuse, recovery, and/or the use of other pretreatment technologies, provided deactivation is achieved and underlying hazardous constituents are treated to achieve the UTS.

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

	<u>CHOXD</u> <u>CHRED</u>	
<u>D003 Reactive Sulfides based on §261.23(a)(5)</u>	<u>CHOXD</u> <u>CHRED</u> <u>INCIN</u> <u>STABL</u>	<u>CHOXD</u> <u>CHRED</u> <u>BIODG</u> <u>INCIN</u>
<u>D003 Explosives based on §§261.23(a)(6), (7), and (8)</u>	<u>INCIN</u> <u>CHOXD</u> <u>CHRED</u>	<u>INCIN</u> <u>CHOXD</u> <u>CHRED</u> <u>BIODG</u> <u>CARBN</u>
<u>D003 Other Reactives based on §261.23(a)(1)</u>	<u>INCIN</u> <u>CHOXD</u> <u>CHRED</u>	<u>INCIN</u> <u>CHOXD</u> <u>CHRED</u> <u>BIODG</u> <u>CARBN</u>
<u>K044 Wastewater treatment sludges from the manufacturing and processing of explosives</u>	<u>CHOXD</u> <u>CHRED</u> <u>INCIN</u>	<u>CHOXD</u> <u>CHRED</u> <u>BIODG</u> <u>CARBN</u> <u>INCIN</u>
<u>K045 Spent carbon from the treatment of wastewaters containing explosives</u>	<u>CHOXD</u> <u>CHRED</u> <u>INCIN</u>	<u>CHOXD</u> <u>CHRED</u> <u>BIODG</u> <u>CARBN</u> <u>INCIN</u>
<u>K047 Pink/red water from TNT operations</u>	<u>CHOXD</u> <u>CHRED</u> <u>INCIN</u>	<u>CHOXD</u> <u>CHRED</u> <u>BIODG</u> <u>CARBN</u> <u>INCIN</u>

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

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

Appendix VII to Part 268 – Table 1 – LDR Effective Dates of Surface Disposed Prohibited Hazardous Wastes

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

<u>Restricted hazardous waste in CSD</u>	<u>Effective date</u>
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1. Solvent-(F001-F005) and dioxin-(F020-F023 and F026-F028) containing soil and debris from CERCLA response or RCRA corrective actions	Nov. 8, 1990.
2. Soil and debris not from CERCLA response or RCRA corrective actions contaminated with less than 1% total solvents (F001-F005) or dioxins (F020-F023 and F026-F028)	Nov. 8, 1988.
3 All soil and debris contaminated with First Third wastes for which treatment standards are based on incineration	Aug. 8, 1990.
4. All soil and debris contaminated with Second Third wastes for which treatment standards are based on incineration	June 8, 1991.
5. All soil and debris contaminated with Third Third wastes or, First or Second Third “soft hammer” wastes which had treatment standards promulgated in the Third Third rule, for which treatment standards are based on incineration, vitrification, or mercury retorting, acid leaching followed by chemical precipitation, or thermal recovery of metals; as well as all inorganic solids debris contaminated with D004-D011 wastes, and all soil and debris contaminated with mixed RCRA/radioactive wastes	May 8, 1992.
6. Soil and debris contaminated with D012-D043, K141-K145, and K147-151 wastes	Dec. 19, 1994.
7. Debris (only) contaminated with F037, F038, K107-K112, K117, K118, K123-K126, K131, K132, K136, U328, U353, U359	Dec. 19, 1994
8. Soil and debris contaminated with K156-K161, P127, P128, P188-P192, P194, P196-P199, P201-P205, U271, U277-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U400-U404, U407, and U409-U411 wastes	July 8, 1996.
9. Soil and debris contaminated with K088 wastes	Oct. 8, 1997.
10. Soil and debris contaminated with radioactive wastes mixed with K088, K156-K161, P127, P128, P188-P192, P194, P196-P199, P201-P205, U271, U277-U280, U364-U367, U372, U373, U375-U379, U381-U387, U389-U396, U400-U404, U407, and U409-U411 wastes	April 8, 1998.
11. Soil and debris contaminated with F032, F034, and F035	May 12, 1997.
12. Soil and debris contaminated with newly identified D004-D011 toxicity characteristic wastes and mineral processing wastes.	Aug. 24, 1998.
13. Soil and debris contaminated with mixed radioactive newly identified D004-D011 characteristic wastes and mineral processing wastes.	May 26, 2000.

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

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

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

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

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

Appendix X to Part 268 [Reserved]

Appendix XI to Part 268—Metal Bearing Wastes Prohibited From Dilution in a Combustion Unit According to §268.3(c)

Appendix XI to Part 268—Metal Bearing Wastes Prohibited From Dilution in a Combustion Unit According to §268.3(c)